Surgically Induced Detachment of the Anterior Hyaloid Membrane From the Posterior Lens Capsule

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Vitreous hemorrhage adhering to the posterior lens capsule prevents adequate visualization of the vitreous cavity and fundus during vitreous surgery and during the dissection of fibrovascular membranes. This type of hemorrhage is difficult to remove by aspiration or resection using a vitreous cutter. We have developed a new technique designed to detach surgically the anterior vitreous for the removal of hemorrhage in patients with proliferative diabetic retinopathy. In this hydrodissection technique, the anterior vitreous is detached from the posterior lens capsule by a forced injection of infusion fluid into the anterior chamber. This technique separates the vitreous hemorrhage adhering to the posterior lens capsule and allows its removal.

**SURGICAL TECHNIQUE**

Hydrodissection of the anterior hyaloid membrane was performed as follows. After core vitrectomy was performed, a side port was created at the limbus. A dull 27-gauge needle was attached to the tip of a 10-mL disposable syringe filled with infusion fluid. The infusion bottle was positioned approximately 10 to 15 cm above the level of the patient’s head, and infusion fluid was infused into the anterior chamber (Figure 2). The plunger of the syringe was depressed firmly for a few seconds to force the infusion fluid into the anterior chamber, which caused the anterior vitreous to suddenly detach from the posterior lens capsule (Figure 3). The detached vitreous hem-

**PATIENTS AND METHODS**

We performed vitreous surgery using the standard 20-gauge, 3-port incision with an infusion cannula, endoillumination, and a vitreous cutter in 2 patients with proliferative diabetic retinopathy. One patient was a 36-year-old woman with a 2-year history of non–insulin-dependent diabetes mellitus; the other was a 49-year-old man with a 16-year history of the same disease. Both patients underwent vitreous surgery for vitreous hemorrhage and tractional retinal detachment associated with proliferative diabetic retinopathy. During their surgery, a vitreous hemorrhage adhering to the posterior lens capsule prevented adequate visualization of the posterior segment, which made it difficult to dissect the fibrovascular membrane. We therefore removed the hemorrhage using the hydrodissection technique reported here.

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forming a ring (Figure 1), re-
loideocapsular ligament of Wieger,
posterior lens capsule via the hya-
anterior hyaloid adheres firmly to the
removal of vitreous hemorrhage ad-
hering to the posterior lens capsule.

This technique allowed the separa-
tion and removal of the vitreous
aspiration and resection with a vit-
agulation therapy, has diminished the
risk of neovascular glaucoma after vit-
matured. Nevertheless, this technique is recom-
recommended for patients with firm
attachment of a vitreous hemorrhage to the posterior lens capsule.

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