

Suprachoroidal hemorrhage following removal of releasable suture after combined phacoemulsification–trabeculectomy

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We report a case of suprachoroidal hemorrhage following removal of a releasable suture after combined phacoemulsification–trabeculectomy.

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Suprachoroidal hemorrhage is a rare but serious complication of intraocular surgery, with a mean incidence of 1.6% after glaucoma filtration surgery.¹ It has also been reported during and after lens extraction in cataract surgery, keratoplasty, and corneal perforation. We highlight an unusual case of suprachoroidal hemorrhage following removal of a releasable suture after combined phacoemulsification–trabeculectomy.

CASE REPORT

A 75-year-old healthy man who had advanced bilateral pseudoexfoliation glaucoma (cup/disc ratio = 0.9) and subluxated cataract had phacoemulsification (without intraocular lens implantation), anterior vitrectomy, and trabeculectomy with mitomycin-C (0.2 mg/dL) in the right eye. Preoperatively, the best corrected visual acuity (BCVA) was 20/60 and the intraocular pressure (IOP) was 28 mm Hg with timolol 0.5% drops twice a day, brimonidine 0.2% drops twice a day, and oral acetazolamide 250 mg 3 times a day. The partial-thickness triangular scleral flap (4.0 mm base at the limbus; apex 3.0 mm from center of the

base) of the trabeculectomy was closed with a single 10-0 nylon releasable suture (CU-5) at the apex.

Fifteen days postoperatively, the BCVA was 20/60 and the IOP was 22 mm Hg. Clinical examination disclosed a flat bleb, a deep anterior chamber, and a patent peripheral iridectomy. Because the IOP was elevated, the releasable suture was removed under topical anesthesia. Thirty minutes later, a large diffuse bleb was formed and the IOP was 4 mm Hg.

Although the patient's vision decreased in the evening after the minor surgical procedure and ocular pain developed the next day, he did not return to the clinic until 5 days after the suture removal. The BCVA had decreased to hand motions. On examination, there was ciliary congestion; corneal edema; iris incarceration in the trabeculectomy ostium, with peaking of the pupil toward the ostium; a shallow anterior chamber; and an exudative retinal detachment with suprachoroidal hemorrhage visible in the pupil area (Figure 1). The IOP was 45 mm Hg. Ultrasonography confirmed the suprachoroidal hemorrhage (Figure 2). On direct questioning, the patient denied having engaged in any activity that might have elevated the episcleral venous pressure such as bending, lifting, coughing, and straining. He was not taking any systemic medication, including anticoagulants. The suprachoroidal hemorrhage was drained, but the BCVA did not improve.

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DISCUSSION

In 1 retrospective case series of 305 consecutive glaucoma filtering procedures,¹ the incidence of suprachoroidal hemorrhage was 1.6% (5 eyes). Thirty-three percent of the aphakic vitrectomized eyes in the study (4/12 eyes) had suprachoroidal hemorrhage. High preoperative IOP has been identified as the single most common risk factor for suprachoroidal hemorrhage.² Other risk factors include aphakia, vitrectomy, and the use of antimetabolites.^{2–4} Our patient had all 4 risk factors and presented with suprachoroidal hemorrhage following removal of a single releasable

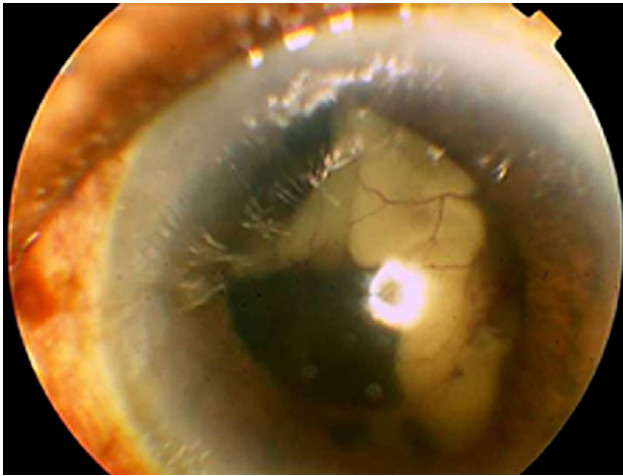


Figure 1. Exudative retinal detachment and choroidal detachment visible in the pupil area.

scleral flap suture. We believe the suprachoroidal hemorrhage developed as a result of the sudden ocular decompression due to increased flow of aqueous through the scleral flap, indicated by the immediate diffuse bleb formation. We are unaware of a report of suprachoroidal hemorrhage occurring following removal of a releasable suture. This report therefore extends the spectrum of minor ocular procedures associated with suprachoroidal hemorrhage.

Digital pressure on the eye before suture removal may help demonstrate whether there are any limitations to flow after suture release. The extent of bleb distention and the IOP after digital pressure can demonstrate whether there is adequate resistance to flow in the subconjunctival space to prevent hypotony after suture release and help determine whether suture release is safe. This preoperative maneuver may

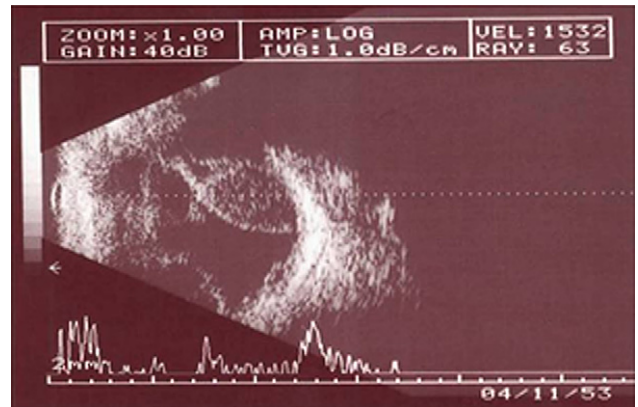


Figure 2. B-scan ultrasonography showing hemorrhagic choroidal detachment.

reduce the risk for suprachoroidal hemorrhage. In addition, placing more than 1 releasable suture that allows a staged reduction of flap resistance during the postoperative period may provide a measure of safety to prevent hypotony and therefore reduce the risk for suprachoroidal hemorrhage.

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