

with optic coherence tomography was 666 μm . One month later, optociliary shunt vessels appeared on the optic disc.

Treatment with repetitive injections of intravitreal bevacizumab based on central retinal thickness is being performed, with visual acuity improvement. Ten months postoperatively, best-corrected visual acuity is 6/10 in the left eye.

CRVO after a filtering glaucoma surgery is an infrequent complication. It has been reported previously in a few cases, always after trabeculectomy with MMC.²⁻⁴ Patients had advanced open-angle glaucoma with nearly total cupped disc, severe visual field loss, and preoperative IOP >20 mm Hg, with steep pressure reduction and very low postoperative IOP.

It has been postulated that an anterior shift of the lamina cribrosa caused by a sudden decrease in the IOP could lead to obstruction of the venous outflow, especially in patients with advanced cupped optic disc.⁵ On the other hand, the association between MMC and retinal vasculature occlusion has been reported. It is known that MMC has a vaso-occlusive effect in systemic vasculature and, despite being applied superficially, the drug can be detected in the aqueous humour after sponge delivery during filtering surgery. In all the described cases of CRVO following trabeculectomy, MMC was used.

In our patient, however, no cytostatic drug was used and no other risk factors for retinal vein occlusion were found, except for the sudden decrease in IOP after deep sclerectomy. To the best of our knowledge, no other case of CRVO after nonperforming filtering glaucoma surgery

without use of cytostatic has been reported in the PubMed database. Sudden decreases in IOP after filtering glaucoma surgeries must be included as a risk factor for retinal vein occlusion.

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Management of pseudophakic malignant glaucoma and ultrasound biomicroscopic features

Malignant glaucoma is characterized by increased intraocular pressure (IOP) accompanied by shallowing or flattening of the anterior chamber, despite patent iridectomy and the presence of a normal posterior segment.¹

A 76-year-old man was referred with raised IOP and shallow anterior chamber. The patient had a history of uncomplicated extracapsular cataract extraction with implantation of a posterior chamber intraocular lens in his left eye. At presentation he had uncorrected visual acuity of 6/38. With a combination of brimonidine tartrate bid, latanoprost and timolol fixed combination eye drops once a day, and acetazolamide 250 mg tid the patient had an IOP of 24 mm Hg in the left eye. The anterior chamber of the left eye was very shallow and the iris was nearly touching the corneal endothelium, but there was still some space between the iris and the endothelium in the periphery.

Initial therapy consisted of Nd:YAG laser peripheral iridotomy, after which the IOP was 40 mm Hg. Since malignant glaucoma was highly suspected, high resolution ultrasound biomicroscopy (UBM) was used to confirm the diagnosis. Anterior chamber depth and axial length was 2.59 and 22.42 mm, respectively, in the right (phakic) eye,

and 2.17 and 22.22 mm, respectively, in the left (pseudophakic) eye. UBM (VuMax UBM, Sonomed Inc, Lake Success, N.Y.) revealed a marked forward displacement of the iris-lens diaphragm and a rotation of the ciliary body anteriorly (Fig 1). At this point anterior hyaloidotomy using Nd:YAG laser was performed; IOP was still 24 mm Hg, and the anterior chamber was shallow. Then the patient underwent transconjunctival, sutureless, 23-gauge pars plana vitrectomy (PPV), which involved excision of a localized area of posterior lens capsule.

Subsequently, anterior chamber depth was 4.38 mm, and UBM showed a deep anterior chamber with backward move-

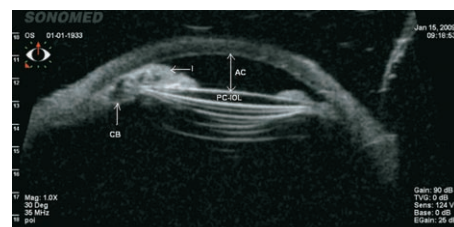


Fig. 1—UBM before Nd:YAG hyaloidotomy, showing shallow anterior chamber, forward displacement of the iris-lens diaphragm, and ciliary body. (UBM, ultrasound biomicroscopy; AC, anterior chamber; l, iris-lens diaphragm; CB, ciliary body.)

ment of the iris–lens diaphragm (Fig. 2). One month after PPV, visual acuity was 6/30 unaided, IOP was 18 mm Hg without any medications, and the anterior chamber was deep.

The exact pathophysiologic mechanism underlying malignant glaucoma is not yet fully understood. Existence of an abnormal anatomic relation between the ciliary processes, the crystalline lens or intraocular lens, and the anterior vitreous face, leading to misdirection of aqueous fluid into the vitreous cavity, is proposed. This has been supported by previous UBM findings.²

The relative positions of anterior segment structures in malignant glaucoma are well visualized using high-frequency UBM, and the images support forward displacement of the iris–lens diaphragm and shallow anterior chamber.³ The UBM findings in our patient demonstrated anterior rotation of the ciliary body, almost causing iridocorneal touch and appositional angle closure. Previous studies have shown that aphakic or pseudophakic eyes may respond well to initial YAG laser disruption of the posterior capsule/anterior hyaloid.⁴ When YAG hyaloidotomy fails, PPV is reported to be a safe and effective procedure if care is taken to take part of the posterior capsule.⁵ We performed

transconjunctival, sutureless, 23-gauge PPV in order to perform minimally invasive surgery in an inflamed globe with high pressure. After vitrectomy and removal of part of the posterior capsule, the anterior chamber deepened, the iris–lens diaphragm moved backward, and the ciliary processes normalized.

Malignant glaucoma is rare after cataract surgery. The case we present demonstrates the efficacy of PPV in the treatment of pseudophakic malignant glaucoma. High-resolution UBM may help to confirm the clinical diagnosis of malignant glaucoma.

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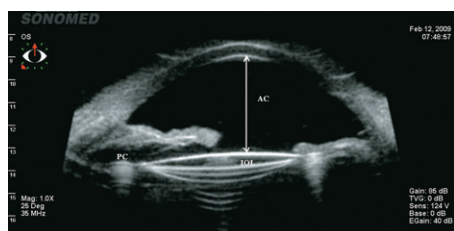


Fig. 2—UBM after PPV: anterior chamber is deep, posterior chamber is prominent. (UBM, ultrasound biomicroscopy; PPV, pars plana vitrectomy; AC, anterior chamber; PC, posterior chamber.)

Macular infarction after 23-gauge transconjunctival sutureless vitrectomy and subconjunctival gentamicin for macular pucker: a case report

Pars plana vitrectomy has undergone significant evolution in the past several years. Self-sealing sclerotomies with smaller-gauge instruments were first described in 1996.¹ The rationale was to create a small-incision wound with possible advantages such as less inflammation, shorter surgery time, and better patient comfort. Macular infarction after intravitreal injection of gentamicin is a well-known drug side effect.² In this report, we present a case of macular infarction that occurred after transconjunctival sutureless vitrectomy (TSV) and prophylactic subconjunctival gentamicin.

A 65-year-old man was referred to our department complaining of blur in the right eye for 3 months. Ophthalmic examination revealed a moderate cataract in both eyes and

an epiretinal membrane (ERM) at the macula in the right eye. His best-corrected visual acuity (VA) was 0.3 OD and 0.6 OS. Fluorescein angiography (FA) showed tortuosity of macular vessels and mild eye leakage in the right eye. Optical coherence tomography (OCT) scans of the right macula revealed an ERM and moderate retinal edema (Fig. 1A). He underwent combined phacoemulsification, intraocular lens implantation, and 23-gauge TSV under local anaesthesia. The ERM was directly removed with microforceps without dye staining. A postoperative subconjunctival injection of gentamicin sulfate (0.2 cc, 40 mg/cc) was applied adjacent to the sclerotomy site. A stream of the solution falling posteriorly was felt from the fundus reflex. The VA on postoperative day 1 was counting fingers at 1 metre. The fundus examination showed cotton-wool patches and edema, suggesting macular infarction, at the preoperative ERM area. This status persisted for more than 1 month. FA examination was arranged and it demonstrated an abrupt