Recurrent endophthalmitis following a scleral fixated intraocular lens in a glaucoma patient

Dear Editor,

We would like to highlight the possibility of recurrent endophthalmitis in a patient with a scleral-fixated intraocular lens (IOL) and glaucoma.

A 65-year-old patient with a history of primary angle closure glaucoma in both eyes, on topical anti-glaucoma medications, presented with redness, pain, and watering in his left eye for 5 days.

The patient had undergone a scleral-fixated IOL implantation in his left eye 1 year ago, after his IOL had got dislocated subsequent to an episode of trauma. He developed endophthalmitis in that eye after 6 months and was treated with intravitreal antibiotics. No causative organism was isolated then. His anti-glaucoma medications had been neglected after the IOL placement. Scleromalacia was not noted in the surgical records of the patient. The axial lengths of the right and left eye were 22.3 and 22.4 mm, respectively. He underwent trabeculectomy with mitomycin C (0.2 mg/ml sub-conjunctivally for 2 min) in the left eye after resolution of endophthalmitis, for uncontrolled intraocular pressure (IOP; 44 mmHg) and pain. Visual acuity was perception of light with inaccurate projection of rays. On follow-up, the bleb remained vascularized and minimally raised. The current episode of redness and pain occurred 4 months after trabeculectomy. The left eye had a visual acuity of no light perception, circumciliary congestion with fixed hypopyon [Fig. 1a]. There was uveal tissue prolapse through scleral flap site constructed for scleral-fixated IOL [Fig. 1b]. The bleb was low and there was vascularization over the bleb. The IOP in the Left eye (LE) was 34 mmHg. Ultrasound of the LE revealed moderate amplitude spikes in the vitreous cavity suggestive of exudates. He was started on topical timolol and brimonidine, and was given anterior chamber vancomycin wash, followed by intensive topical antibiotics (concentrated cefazolin 50 mg/ml and tobramycin 14 mg/ml). On culture of the anterior chamber aspirate, *Staphylococcus aureus* was isolated. Four weeks later, the hypopyon had resolved. However, there was hypotony and a choroidal detachment was noted on ultrasound. The uveal prolapse had settled and the overlying conjunctiva showed vascularization.

Increase in IOP after scleral fixation of IOL has been reported in literature. Yan *et al.*,[1] in a retrospective review of 65 eye, of scleral-fixated posterior chamber IOL implantation, reported elevated IOP requiring intervention in 16% of eyes with pre-existing glaucoma and 13% of eyes that did not have pre-existing glaucoma

Our patient had high IOP, which led to uveal tissue prolapse at scleral flap site for scleral-fixated IOL. This exposed uveal tissue probably acted as a conduit for the entry of microorganisms into the eye, resulting in endophthalmitis. Even though he underwent trabeculectomy, the surgery failed.

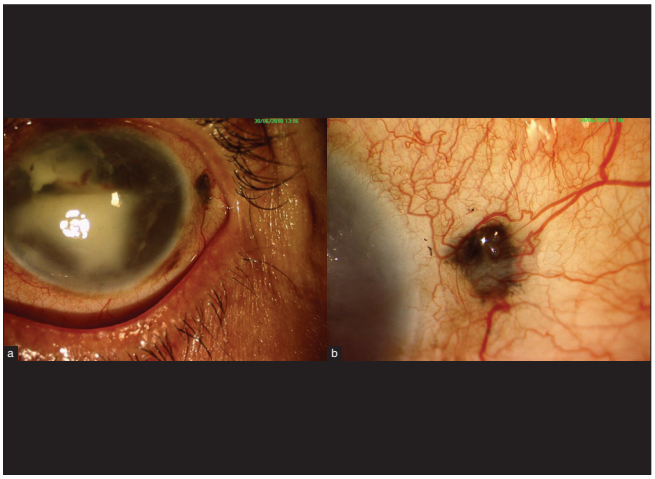

Figure 1: (a) Fixed hypopyon with circumciliary congestion. (b) Uveal tissue prolapse through scleral flap site for scleral-fixated intraocular lens

The possibility of bleb related endophthalmitis was ruled out in the absence of a thin avascular bleb.

Scleral-fixated IOLs should be used in glaucoma patients with additional care. They have to be very carefully monitored both for IOP control and scleral flap site integrity in case of high IOP. In case of glaucoma poorly responsive to topical medications, simultaneous trabeculectomy at the time of scleral fixation of IOL has also been described.[2] A glaucoma drainage device could have been considered for IOP control in cases with high risk of failure of trabeculectomy.

Paromita Dutta, Viney Gupta, Ravi Byparedddy

Dr. Rajendra Prasad Centre for Ophthamic Sciences, Department of Ophthalmology, All India Institute of Medical Sciences, New Delhi, India

Correspondence to: Dr. Paromita Dutta, C/o Indrajit Datta, Sequence Design, Logix Technopark, Tower B, 5th Floor, Sector 127, Noida, Uttar Pradesh, India.
E-mail: mitad.4@gmail.com

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