

Silodosin-associated intraoperative floppy iris syndrome

Sir,

We would like to draw attention to the association between silodosin, a selective alpha 1A-adrenergic receptor antagonist used in the treatment of benign prostatic hypertrophy (BPH), and intraoperative floppy iris syndrome (IFIS).

A 75-year-old male presented to us for cataract surgery. He had been suffering from BPH for the past 8 years and was being treated with oral silodosin 8 mg daily for 4 years. The patient had not been informed of any potential ocular side effects of silodosin. He was neither diabetic nor hypertensive. His vision in the right eye and left eye was 20/80, N18 and 20/200, N36, respectively. Anterior segment examination was unremarkable but for nuclear sclerosis 2+ and 3+ in the right and left eye, respectively. Intraocular pressure was 10 mmHg in both the eyes. Fundus was normal. He was advised phacoemulsification with intra-ocular lens implantation in the left eye which he underwent 3 days later. Preoperatively, the pupil was dilated with tropicamide 0.8% and phenylephrine 5% to a diameter of 6.0 mm. After a standard peribulbar block, routine phacoemulsification was performed with Alcon Infinity phaco machine using Ozil[®] technology and stop and chop technique through a 3.5 mm superior sclerocorneal tunnel. After hydrodissection, the pupil constricted to 4.0 mm diameter, and during subsequent steps, there was iris undulation and billowing. The anterior chamber was frequently formed with Viscoat[®] (Alcon Laboratories, Puurs, Belgium) to maintain pupillary dilatation. There was no iris prolapse at any time during surgery although the iris tended to be drawn toward the side port. An acrylic intra-ocular lens (Acrysof IQ, Alcon Laboratories, Cork, Ireland) was implanted and the surgery was completed safely. The postoperative period was uneventful. His vision was 20/20 and N6 with correction.

IFIS (iris billowing, iris prolapse, and progressive intraoperative pupillary miosis) described in 2005 was initially associated with tamsulosin use in BPH.^[1] But since then, many other pharmacological agents and systemic conditions have also been implicated, and the list is ever expanding.^[2,3] Given the common age group of cataracts and BPH, it is not uncommon to encounter such patients in daily practice. A large Indian study reported that 7% of cataract surgery patients were using tamsulosin and the incidence of IFIS was 4.28%.^[4]

Silodosin introduced in 2008 is a highly selective adrenoceptor antagonist blocker effective in treating lower urinary tract symptoms of BPH with minimal extra-prostatic systemic effects. Silodosin has previously not been implicated to cause IFIS except for a single case

reported by Ipekci *et al.*^[5] The severity of IFIS encountered in our patient was moderate and the surgery was completed safely. No special measures other than the use of Viscoat[®] were required in this patient. However, it would always be prudent to be prepared with all known measures to maintain adequate pupillary dilatation during surgery. Preoperative atropine eye drops, intra-cameral phenylephrine or epinephrine, Healon5[®] (sodium hyaluronate 2.3%) or Viscoat[®] (sodium hyaluronate 3.0% to chondroitin sulfate 4.0%) with low aspiration flow and vacuum settings, and iris retractors and pupil expansion devices have been advocated to reduce IFIS.^[2] More recently, a randomized study found that subtenon injection of 2.5 ml of lidocaine 2.5% reduced all the three features of IFIS in mild-to-moderate cases.^[6] Sometimes, a combination of strategies are required to minimize the features of IFIS. When preoperative pupillary dilation is poor, it is safer to use iris retractors or pupil expansion devices from the beginning of the surgery.^[2,6]

As IFIS is reported to be higher in India, and the true prevalence of BPH or the number of patients using IFIS causing-drugs is largely unknown,^[4] ophthalmologists should be aware of the condition, and during the preoperative workup of cataract surgery, should be alert to systemic medications used by the patient.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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Access this article online	
Quick Response Code:	Website: www.ijo.in
	DOI: 10.4103/ijo.IJO_704_16

Cite this article as: Chatterjee S, Chatterjee S, Agrawal D. Silodosin-associated intraoperative floppy iris syndrome. *Indian J Ophthalmol* 2017;65:538-9.

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