Intraoperative Floppy Iris Syndrome (IFIS) Associated with Systemic Alpha-1 Blockers
ASCRS and AAO Educational Update Statement

Since intraoperative floppy iris syndrome (IFIS) was first described in 2005, its association with the systemic alpha-1 adrenergic antagonist, tamsulosin (Flomax®, Boehringer-Ingelheim Pharmaceuticals, Inc., Ridgefield, CT), has become well established [1-7]. The clinical manifestations of IFIS complicating cataract surgery are poor preoperative pupil dilation, iris billowing and prolapse, and progressive intraoperative miosis [1]. In one prospective study, 90% of 167 eyes from patients taking tamsulosin exhibited some degree of IFIS during cataract surgery [5]. Until recently, tamsulosin has been the only systemic alpha-1 antagonist which is selective for the alpha-1A receptor subtype [8]. IFIS has also been reported with non-subtype specific alpha-1 adrenergic antagonists, such as terazosin (Hytrin®; Abbott Laboratories, Inc., North Chicago, IL), doxazosin (Cardura®; Pfizer Inc, New York, NY), and alfuzosin (Uroxatral®; Sanofi-Aventis, Paris, France). However, several prospective and retrospective studies suggest that IFIS is more likely to occur with tamsulosin than with the non-specific alpha-blockers [1-3, 6, 9]. Tamsulosin and alfuzosin are considered to be uroselective and less likely to cause postural hypotension [7]. Recently a new alpha-1A subtype specific antagonist, silodosin (Rapaflo), was approved for BPH, and it is anticipated that it will also cause IFIS.

A number of studies confirm that cataract surgical complications are increased when IFIS is not anticipated or recognized by the surgeon [1, 4, 5-7]. The same prospective study of 167 consecutive eyes from tamsulosin patients undergoing cataract surgery showed that when the surgeon was forewarned by a history of tamsulosin use, surgical risks were reduced by using a variety of alternative small pupil management strategies [5]. However, because only experienced high-volume surgeons participated in this multi-center trial, the results may not be representative of the global ophthalmic surgical community at large. Discontinuing tamsulosin prior to cataract surgery did not reduce the severity of IFIS in this prospective trial. Surprisingly, IFIS can occur up to several years after discontinuation of tamsulosin [1, 5].

According to a 2008 online survey sent to ASCRS members, 95% of the nearly 1000 respondents believe that tamsulosin makes cataract surgery more difficult and 77% believe that it increases the risks of surgery [10]. Specifically, cataract surgeons reported an increased rate of significant iris damage (52% of respondents) and an increased rate of posterior capsule rupture (23% of respondents) in eyes with IFIS during the past two years. Of those respondents with sufficient experience to judge, 90% believe that IFIS is more likely to occur with tamsulosin than with non-specific alpha blockers. Many ophthalmologists (59%) would recommend an ophthalmic evaluation for patients with a history of cataracts or decreased vision prior to initiating treatment with tamsulosin. Nearly two thirds of the respondents would either avoid taking tamsulosin if they themselves had cataracts (41%) or would have their cataract removed first (23%). The former sub-group includes 17% who would still defer cataract surgery, but would take a non-specific alpha-1 blocker instead of tamsulosin.

In a patient with a known diagnosis of cataract, prescribing physicians may wish to consider involving the patient's cataract surgeon prior to initiating non-emergent, chronic tamsulosin or alpha blocker treatment. Options might include an eye exam or having either the patient or the prescribing MD communicate with the cataract surgeon. Patients should also be encouraged to report any prior or current history of alpha-1 antagonist use to their ophthalmic surgeon prior to undergoing any eye surgery.

References:

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