

I guess you take tamsulosin

Apuesto a que toma tamsulosina

Dear Editor,

We present the case of a 71-year old male programmed for right eye cataract surgery. His personal history indicated type 2 diabetes for the past four years. He was receiving treatment with Diamicron (gliclazide) and Adiro (acetylsalicylic acid), together with a daily tablet for the prostate (he was unable to recall the name of the medication).

Visual acuity was 0.3 in the right eye and 0.6 in the left. Slit lamp exploration revealed the presence of a nuclear cataract in both eyes (somewhat more advanced in the right eye), that explained the poor visual acuity. Funduscopy proved normal, with no diabetic retinopathy at the time. The patient was therefore placed on the waiting list for right eye cataract phacoemulsification and implantation of an intraocular lens.

In the ambulatory major surgery unit, the usual protocol was carried out, comprising pupil dilatation including the instillation of three droplets of tropicamide and three droplets of phenylephrine — with very poor mydriasis that required the use of iris hooks during surgery (fig. 1). Surgery was performed under sub-tenon's anesthesia, since manipulation of the iris may cause discomfort under topical anesthesia. The procedure lasted about 45 minutes (longer than usual), and was completed without complications, though a very floppy iris was noted during the operation, with a constant tendency to herniate through the corneal incisions.

In the year 2005, Chang for the first time described a syndrome he referred to as intraoperative floppy iris syndrome¹. This syndrome is characterized by a floppy iris, which tends to prolapse through the corneal incisions, with progressive loss of pharmacological mydriasis during cataract surgery. It has been related to the chronic use of adrenergic antagonists, and very particularly with the use of tamsulosin.

The syndrome has also been described in relation to other alpha-antagonists such as terazosin, doxazosin, alfuzosin, prazosin or indoramin², beta-receptor antagonists such as labetalol, or even other drug groups (antipsychotics such as zuclopenthixol, antidepressants such as mianserin, vasopressors, alpha-5 reductase inhibitors such as finasteride, and even herbal remedies such as extracts of *saw palmetto*)³. However, most of the literature points to a particularly close association to tamsulosin. One study examined 92 eyes and found an odds ratio (OR) of 32.15 between tamsulosin and alfuzosin, in favor of the former drug².

Tamsulosin is an alpha-adrenergic receptor antagonist authorized by the FDA for treating the symptoms caused by benign prostate hyperplasia in males, though it is also

used on a compassionate basis for urinary retention in women. At least 10 commercial presentations are available in Spain. The drug is marketed in two formulations: one has a half-life of about 12 hours, while the other is a sustained release formulation with a half-life of approximately 24 hours.

The physiopathological explanation for this very specific side effect of tamsulosin is that it selectively inhibits the alpha-1A receptors of the prostate gland, and thus induces very little orthostatic hypotension. However, these alpha-1A receptors are also the majority adrenergic receptors found in the pupil dilating muscle. Continuous block of these receptors leads to atrophy of the mentioned muscle. This in turn gives rise to poor initial mydriasis and a tendency towards iris herniation through the incisions. As a result, the duration of surgery is significantly prolonged, and the potential for other complications also increases (fundamentally posterior capsule rupture, zonular deinsertion, traumatic iris atrophy, postoperative hypertensive peaks, and corneal decompensation secondary to endothelial loss)².

All the literature on the subject coincides that tamsulosin use very significantly increases the probability of complications during cataract surgery (and to a lesser degree in other forms of eye surgery such as glaucoma surgery). The exact dimension of the problem is difficult to establish, since not all patients who use tamsulosin develop floppy iris syndrome during cataract surgery, and not all those who develop the syndrome do so to the same extent. Nevertheless, it is clearly a very relevant epidemiological problem, since the two disease conditions that give rise to floppy iris syndrome are highly prevalent. As a result, the syndrome recently has extended beyond the ophthalmological literature and has become the subject of an editorial in JAMA⁴. This same journal published a rigorous study in the same issue, in which the authors analyzed 96,128 surgical procedures in the healthcare area of Ontario (Canada), and reached the conclusion that tamsulosin use multiplies the risk of needing second surgery in the immediate postoperative period 2.33-fold⁴. Taking into account that most patients who suffer a complication do not need second surgery, we can gain an idea of the magnitude of the problem. This 2.33-fold increase in fact is only the tip of a largely occult iceberg.

It was soon seen that this is not a pharmacological side effect in the classical sense of the term, since the syndrome may manifest several years after treatment cessation. This at least partially irreversible nature of the problem is believed to be due to the fact that the continuous drug-induced inhibition of the pupil dilating muscle leads to atrophy of the latter. In fact, it has recently been shown by optical coherence

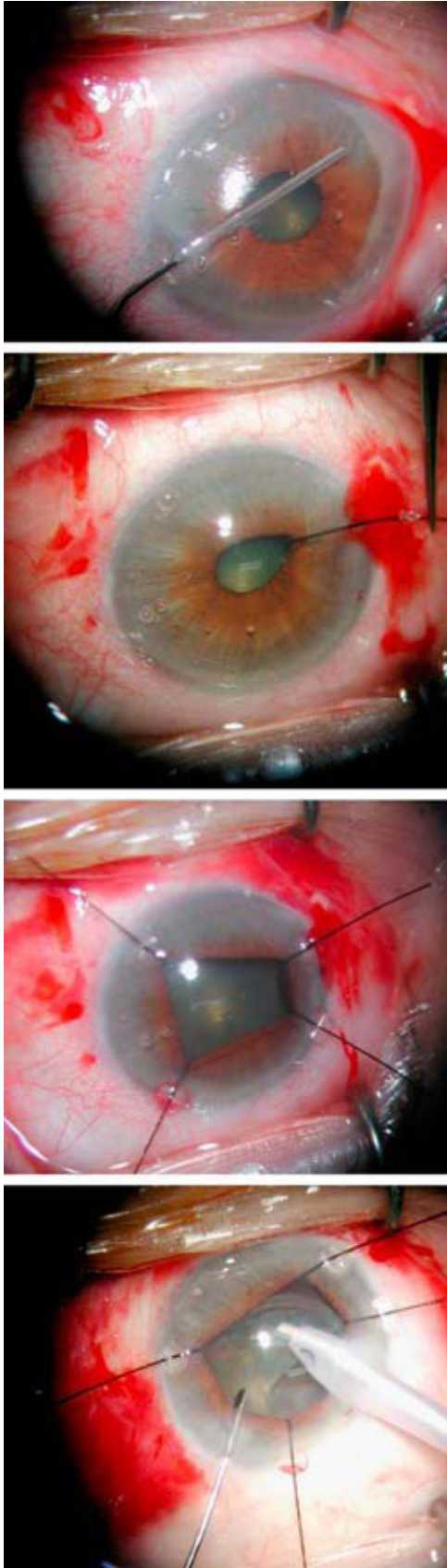


Figure 1 – Sequence summarizing cataract surgery in a patient taking tamsulosin. As a result of the poor mydriasis, iris hooks had to be used.

tomography (OCT) of the anterior segment that patients who use or have used alpha-receptor antagonists show a very significant reduction in iris thickness (355 μm in the treated group versus 447 μm in the control group)⁵. As a result, it is not clear whether suspending the drug a few days before surgery is entirely effective.

Although some authors advocate premedication with atropine or the injection of epinephrine into the anterior chamber during surgery, no consensus has been established regarding the effectiveness of such measures⁶⁻⁸, and in most cases the surgeon is obliged to use mechanical devices to maintain adequate mydriasis during the operation. Iris hooks are the most popular devices (fig. 1), though alternatives can also be found on the market, such as Malyugin rings^{8,9}.

We consider that the problem does not arise on the day of cataract surgery but several years earlier, when the urologist prescribes tamsulosin in a patient not yet subjected to cataract surgery. It is therefore essential for urologists to be aware of this syndrome. We believe that the fact that a patient has cataracts should be regarded as a relative contraindication to tamsulosin treatment, and that if such treatment is necessary, the patient should undergo prior ophthalmological evaluation¹⁰.

REFERENCES

1. Chang DF, Campbell JR. Intraoperative floppy iris syndrome associated with tamsulosin. *J Cataract Refract Surg.* 2005;31:664-73.
2. Blouin MC, Blouin J, Perreault S, Lapointe A, Dragomir A. Intraoperative floppy-iris syndrome associated with alpha1-adrenoreceptors: Comparison of tamsulosin and alfuzosin. *J Cataract Refract Surg.* 2007;33:1227-34.
3. Pringle E, Packard R. Antipsychotic agent as an etiologic agent of IFIS. *J Cataract Refract Surg.* 2005;31:2240. 2241, author reply 2241.
4. Bell CM, Hatch WV, Fischer HD, Cernat G, Paterson JM, Gruneir A, et al. Association between tamsulosin and serious ophthalmic adverse events in older men following cataract surgery. *JAMA.* 2009;301:1991-6.
5. Prata TS, Palmiero PM, Angelilli A, Sbeity Z, De Moraes CG, Liebmann JM, et al. Iris morphologic changes related to alpha(1)-adrenergic receptor antagonists implications for intraoperative floppy iris syndrome. *Ophthalmology.* 2009;116:877-81.
6. Shugar JK. Prophylaxis for IFIS. *J Cataract Refract Surg.* 2007;33:942-3.
7. Bendel RE, Phillips MB. Preoperative use of atropine to prevent intraoperative floppy-iris syndrome in patients taking tamsulosin. *J Cataract Refract Surg.* 2006;32:1603-5.
8. Chang DF, Braga-Mele R, Mamalis N, Masket S, Miller KM, Nichamin LD, et al. ASCRS white paper: Clinical review of intraoperative floppy-iris syndrome. *J Cataract Refract Surg.* 2008;34:2153-62.
9. Chang DF, Braga-Mele R, Mamalis N, Masket S, Miller KM, Nichamin LD, et al. Clinical experience with intraoperative floppy-iris syndrome results of the 2008 ASCRS member survey. *J Cataract Refract Surg.* 2008;34:1201-9.
10. Gonzalez Martin-Moro J, Martinez Silva V. Treatment with tamsulosin. Should the cataract be operated before? *Arch Esp Urol.* 2008;61:921-2.

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Peyronie's disease. Complete plaque excision and autologous graft with anterior rectus fascia

Enfermedad de Peyronie. Escisión completa de la placa e injerto autólogo con fascia anterior de los rectos

Dear Editor,

We present the case of a 52-year-old male with a history of type 2 diabetes, arterial hypertension cerebrovascular transient ischemic attack, and erectile dysfunction treated with phosphodiesterase inhibitors. The patient consulted due to a two-year history of painful dorsal incurvation of the penis that had increased despite medical treatment with vitamin E and colchicine, and which practically impeded penetration. At exploration, a dense, fibrous plaque was palpated, located on the dorsal midline at the base of the penis, and measuring approximately 3 × 1.5 cm in size. The Kelami test was used to calculate the degrees of incurvation (45°), and penile ultrasound confirmed the diagnosis and size of the plaque. During surgery, and after artificial erection induction, we found the degree of incurvation to be somewhat greater (55°), and the size of the penis was moreover limited (12 cm in the erect state). Complete removal of the plaque was thus carried out with a cold scalpel, followed by autologous grafting with anterior rectus fascia and ventrolateral tunica albuginea

plication (figs. 1 and 2). Posteriorly, a polypropylene mesh was placed to close the anterior fascia defect. Twelve months after surgery the patient had erections with phosphodiesterase inhibitors (which he previously also needed) and showed preserved sensitivity and minimum incurvation that did not complicate sexual intercourse.

Peyronie's disease is an infrequent condition probably resulting from penile traumatism (though the etiology remains uncertain), giving rise to inflammation of the tunica albuginea and, ultimately, cicatrization and incurvation of the penis¹⁻³. Initial treatment for the acute presentation of the disease is conservative, with vitamin E, colchicine, nonsteroidal antiinflammatory drugs, etc., being the most commonly prescribed drugs². Surgery is generally reserved for those cases that fail to respond to conservative management, once the fibrotic process has stabilized, and in the case of patients with severe deformities of the penis that impede satisfactory sexual intercourse⁴. The surgical options vary according to the size of the plaque, the length of the penis,

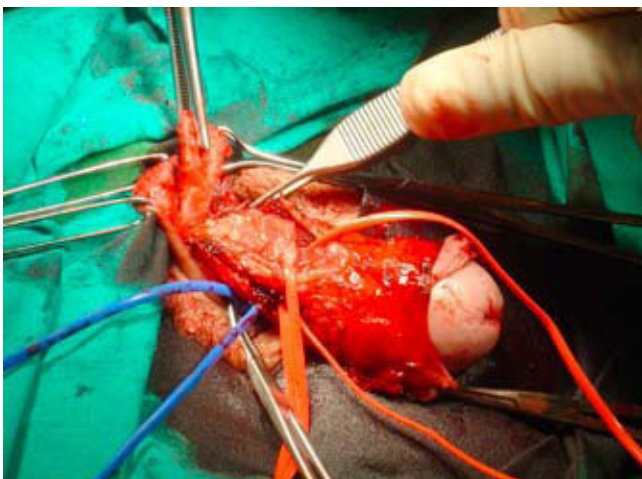


Figure 1 – Peyronie plaque removal using a cold scalpel.



Figure 2 – Grafting over the corpora cavernosa and fixation with two continuous vicryl 4/0 sutures.