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Eye (2007) **21**, 677–678. doi:10.1038/sj.eye.6702679;
published online 22 December 2006

Sir,
Intraoperative floppy iris syndrome with doxazosin

Intraoperative floppy iris syndrome (IFIS) was first described by Chang and Campbell¹ as a triad of a flaccid iris stroma that undulates and billows in response to intraocular fluid currents, a propensity for the floppy iris stroma to prolapse toward the incisions despite proper wound construction, and progressive intraoperative pupil constriction. The Food and Drug Administration warned health professionals about this side effect observed during cataract surgery in some patients currently or previously treated with tamsulosin,² an α_2 -adrenergic-receptor antagonist licensed for the functional symptoms of benign prostatic hyperplasia (BPH).

The awareness of this problem is evidenced by the surge in the publications on this topic since.^{3–5} The reported prevalence of this condition is 63–100% among tamsulosin users.^{1,3} More recent anecdotal reports⁶ have suggested that it may be associated with all four commercially available α_1 -adrenergic-receptor antagonists (alfuzosin, doxazosin, tamsulosin, and terazosin). We here report the first case of IFIS in a patient on doxazosin.

Case report

Since January 2006, we have routinely started to identify the use of tamsulosin in patients who are listed for cataract surgery. An audit of 577 eyes that underwent phacoemulsification with intraocular lens implant between January and April 2006 revealed seven patients (10 eyes) who were on tamsulosin. All the patients were male with a mean age of 77.8 years. In this retrospective audit, there was no concern reported with pupillary dilation preoperatively. IFIS of any degree was seen in seven eyes (70%). Modification of the surgical technique, that is, use of iris hooks, was needed in three eyes and corneal or side port incision needed suturing in four eyes. All the patients achieved good visual acuity and no complications were reported.

Additionally, we identified two patients who were taking nonselective α -blockers for benign prostatic hyperplasia. One of these patient on doxazosin (2 mg twice a day) showed typical features of IFIS including intraoperative miosis and iris prolapse through the main and side port. Although the surgery was completed without resorting to any additional manoeuvres, iris chafing was noted at the end of surgery. This patient was in good general health and did not have past history of any ocular disease. The patient achieved best-corrected visual acuity of 6/6. The other patient on alfuzosin (2.5 mg twice a day) underwent routine surgery and did not reveal any features suggestive of IFIS.

Discussion

Doxazosin is a nonselective α -blocker that is used for BPH and as a combination treatment for hypertension. Published medical literature suggests the possibility of IFIS in patients on other α -blockers; however, it has not been reported so far.

Since the identification of this case, we have started to identify the use of all the α -blockers in patients booked for cataract surgery. As there are no preoperative variables to suggest the possibility of this unexpected and unpredictable syndrome, we believe that identification of these cases preoperatively is the best safe-guard.

This case highlights that a careful medical history should be taken for every patient undergoing cataract surgery to elucidate IFIS predisposition based on concurrent α -blocker use.

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Financial interests: None

Eye (2007) **21**, 678–679. doi:10.1038/sj.eye.6702680;
published online 23 February 2007

Sir,
Variation in management during and after retinal surgery for retinopathy of prematurity

We read with great interest the paper of Chen *et al*¹ on the considerable variation in practice among ophthalmologists regarding the anaesthetic methods employed in the treatment of retinopathy of prematurity (ROP) in the UK.

In contrast to data on the ophthalmologic outcome following treatment for ROP, nonophthalmologic short outcome variables are almost absent, resulting in variation in practice of anaesthetic management based mostly on personal opinions, habits, and perceived eminence.

In the design of the initial Multicenter trial of Cryotherapy (Cryo-ROP), uniformity on the ophthalmologic management was emphasized, but caregivers were given freewheel on anaesthetic management. Nonophthalmologic complications were recorded in 21/157 (13%) treatments, although the authors concluded that 'while surgery was not stressful, no unexpected complications occurred during or shortly after surgery'.² Since this Cryo-ROP trial in the 1980s, both ophthalmology and neonatology have changed.

At present, laser treatment, based on the ophthalmologic advantages of laser treatment, is the preferred treatment modality, but this switch was also of relevance for some non-ophthalmologic outcome variables because we recently documented that laser treatment resulted in a most limited postoperative inflammatory response and a faster clinical recovery.^{3,4}

Laser photocoagulation was associated with a minor increase in C-reactive protein (CRP) compared with a marked increase after cryoablation, reflecting reduced tissue damage and inflammation of laser photocoagulation compared to cryoablation.³ Using standardized evaluation and treatment of pain after surgery in a single neonatal unit, a significant decrease in

Table 1 Clinical characteristics in infants who received cryotherapy for retinopathy of prematurity (1996–2001) or laser treatment (2001–2005)

	1996–2001	2001–2005
Number of infants	42	19
Gestational age at birth (weeks)	26.3 (1.5)	25.8 (1.2)
Weight at birth (g)	764 (188)	689 (135)
Postnatal age at surgery (days)	62.5 (14.5)	63 (13.5)
Weight at surgery (g)	1705 (340)	1488 (256)

Results reported by mean and SD.

duration of postoperative ventilation, in postoperative administration of analgesics, and in time until regain of full enteral feeding, was documented in infants who received laser photocoagulation compared with cryo-treated neonates.^{4,5}

Neonatal care has also changed. Since the 1980s, survival rates at threshold of viability have increased dramatically, resulting in an even more vulnerable group of preterm neonates who need laser treatment, as illustrated by the decrease in weight at surgery in our unit over the last 10 years (Table 1).^{3–5} There is a trend to treat retinopathy in an earlier phase in an attempt to ameliorate long-term visual outcome.⁶ Such strategy is likely to further increase the number of infants who will undergo retinal surgery. Caregivers of various disciplines (ophthalmologists, anaesthesiologists, neonatologists) should, therefore, embark on a common project to at least document the nonophthalmologic outcome variables in a prospective approach, following the different anaesthetic treatment options mentioned by Chen *et al*.¹ The only alternative is to just wait another decade until the next observation on variation of anaesthetic management of ROP appears.^{1,7}

Acknowledgements

The clinical research of K Allegaert is supported by the Fund for Scientific Research, Flanders (Belgium) by a Clinical Doctoral Grant (A 6/5–KV–G 1).

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