

Figure 3 Fundus photograph at 3 months post-surgery showing clearance of premacular membrane and a sealed hole.

and membrane peel was performed, revealing a fullthickness macular hole, which was managed conventionally. There was minimal intra-operative bleeding. Three months postoperatively the macula was free of any fibrovascular element (Figure 3) and visual acuity improved to 6/12.

Discussion

Bevacizumab has proven effective as an adjunctive treatment for reducing the vascularity of membranes before diabetic vitrectomy.^{3–5} In our case, the intraoperative finding of a macular hole was unexpected. Contraction of the premacular membrane briskly devascularised by bevacizumab may have resulted in tangential forces on the retina causing macular hole formation.

The marked attenuation of vasculature observed after an intravitreal bevacizumab of 1.25 mg raised concerns of its effects on native retinal vasculature, particularly where there is widespread capillary non-perfusion. In the light of a dose–response relationship reported in proliferative diabetic retinopathy³ and the likely causation of macular hole in our patient, a smaller dose of bevacizumab would have been preferable. Intravitreal bevacizumab is a powerful pre-operative adjunct for extensive diabetic fibrovascular disease but caution should be exercised in titrating the dosage to minimise complications associated with rapid devascularisation.

References

- Rosenfeld PJ, Moshfeghi AA, Puliafito CA. Optical coherence tomography findings after an intravitreal injection of bevacizumab (Avastin) for neovascular age-related macular degeneration. *Ophthalmic Surg Lasers Imaging* 2005; 35: 331–335.
- 2 Rosenfeld PJ, Fung AR, Puliafito CA. Optical coherence tomography findings after an intravitreal injection of

bevacizumab (Avastin) for macular oedema from central retinal vein occlusion. *Ophthalmic Surg Lasers Imaging* 2005; **36**: 336–339.

- 3 Avery RL, Pearlman J, Pieramici DJ, Rabena MD, Castellarin AA, Nasir MA *et al*. Intravitreal bevacizumab (Avastin) in the treatment of proliferative diabetic retinopathy. *Ophthalmology* 2006; **113**: 1695–1705.
- 4 Chen E, Park C. Use of intravitreal bevacizumab as a preoperative adjunct for tractional retinal detachment repair in severe proliferative diabetic retinopathy. *Retina* 2006; **26**: 699–700.
- 5 Mason JO, Nixon PA, White MF. Intravitreal injection of bevacizumab (Avastin) as adjunctive treatment of proliferative diabetic retinopathy. *Am J Ophthal* 2006; **142**: 685–688.

JS Gandhi¹, LT Tan¹, I Pearce² and SJ Charles¹

¹The Retinal Unit, Manchester Royal Eye Hospital, Manchester, UK ²St Paul's Eye Unit, Royal Liverpool University Hospital, Liverpool, UK E-mail: leeteaktan@googlemail.com

Eye (2009) **23**, 742–743; doi:10.1038/eye.2008.99; published online 11 April 2008

Si

Floppy Iris Syndrome Hull Hooks (FISH Hooks): a new technique for managing IFIS in trabeculectomy surgery

Further to the paper entitled 'Alpha antagonists and intraoperative floppy iris syndrome (IFIS) during Trabeculectomy' by Au *et al*¹ in May 2007 (the only reported case in the literature), we report two further cases—one anticipated, the other not.

Case 1: 'the problem'

A 73-year-old Caucasian male with primary open angle glaucoma underwent augmented trabeculectomy surgery. Pilocarpine 4% was administered preoperatively. During the sclerostomy using a Khaw punch, the iris was noted to be atonic and immediately prolapsed through the ostium (see Figure 1). This was not anticipated.

With direct questioning on the operating table, the patient explained that he had been taking the α -1 antagonist, Tamsulosin[®], but this had been stopped 3 months before. The diagnosis of IFIS was made. Several different methods failed to reposit the iris including: cutting a large peripheral iridectomy; stroking the cornea; sweeping the iris with a Rycroft cannula through the paracentesis; and using any intracameral injection (BSS, Miochol, or viscoelastic) exacerbated the prolapse. Ultimately, the scleral flap was sutured with one fixed 10/0 nylon suture and a second corneal paracentesis was made to sweep the iris back into the anterior chamber with the bimanual irrigation/ aspiration probes. The remainder of the procedure was uncomplicated and the patient made excellent postoperative progress.





Figure 1 Prolapsing of the iris immediately after construction of the sclerostomy wound.



Figure 2 Colour photograph illustrating the FISH Hook technique for preventing iris prolapse.



Figure 3 Illustrating the 'fish mouthing' of the iris using two iris hooks, preventing iris prolapse.

Case 2: 'the solution'

A 62-year-old Caucasian male with chronic narrow angle glaucoma who was known preoperatively to be taking

the α a-1 antagonist, Alfusozin[®] also underwent trabeculectomy surgery, but IFIS was anticipated. Before the sclerostomy, two limbal paracentesis incisions were made at the 3 and 9 o'clock positions using a 15° blade, through which iris hooks were used to draw the pupil into a fish mouth position (see Figures 2 and 3).

The surgical peripheral iridectomy was easily performed on a taut superior iris. There was no spontaneous, flaccid iris prolapse. The hooks were removed after closure of the scleral flap and the two limbal side ports were hydrated. The iris returned to its preoperative position. The procedure was controlled and uncomplicated.

Comment

The first of our cases illustrates the difficulty in managing IFIS in filtration surgery. None of the suggested techniques reported in the literature¹ worked in this case. An AC maintainer would exacerbate IFIS.

The second case describes the Floppy Iris Syndrome Hull Hooks (FISH Hooks) technique, which allows the surgeon to remain in complete control. Alternatively, a deep sclerectomy procedure, which avoids entering the anterior chamber, could be considered where IFIS is anticipated.

Reference

1 Au L, Wechsler D, Fenerty C. Alpha antagonists and intraoperative floppy iris syndrome (IFIS) during trabeculectomy. *Eye* 2007; **21**: 671–672.

JH Norris¹, S Mall² and CAM Burnett³

¹Department of Ophthalmology, Hull and East Yorkshire Eye Hospital, Hull, UK ²Department of Ophthalmology, Hull and East Yorkshire Eye Hospital, Hull, UK ³Department of Ophthalmology, Hull and East Yorkshire Eye Hospital, Hull, UK E-mail: jononorris@hotmail.com

Competing interest: None.

Eye (2009) **23**, 743–744; doi:10.1038/eye.2008.107; published online 11 April 2008

Sir, **Reply to: Costa DC** *et al*

We read with great interest the paper by Costa *et al*¹ on the use of subconjunctival triamcinolone acetonide (SCTA) in the management of corneal endothelial graft rejection.

SCTA has been used for corneal transplant surgery.^{2,3} However, these have been isolated case reports along with multiple arm therapy in often complicated penetrating keratoplasties (PKPs).⁴ The effect of SCTA with steroid drops alone could not be ascertained.