

Figure 3 OCT of the right macula (a) before Avastin treatment, showing cystoid oedema, and (b) 3 weeks afterwards, when the oedema had resolved.

was 1.0 mm and the macular oedema was no longer demonstrable on OCT (Figure 3b).

Comment

To our knowledge, this is the first report of intravitreal Avastin treatment for VPRT. The injection was followed by a dramatic improvement within 3 weeks. Although the patient experienced sensory and motor weakness, no physical abnormality was detected.

This promising result warrants further studies to assess the efficacy of Avastin in the treatment of VPRT, and to determine whether repeated injections are required.

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Sir, A novel manoeuvre using a Kelly punch in the management of severe capsule contraction syndrome

Capsule contraction syndrome is an exaggerated fibrotic response reducing the size of the anterior capsule opening after continuous curvilinear capsulorhexis. The condition complicates uneventful phacoemulsification cataract extraction but can be associated with certain pre-existing co-pathologies, certain intraocular lenses, and surgical technique. We report a case of severe, recurrent anterior capsule contraction which was eventually successfully treated using a Kelly Descemet's membrane punch.

Case report

A 77-year-old black African gentleman with past ocular history of open-angle glaucoma was admitted for daycase cataract surgery. In December 2002 he underwent right phacoemulsification with implantation of a 21.0 dioptre three-piece loop haptic silicone posterior chamber intraocular lens (IOL) (Allergan S140NB). His surgery was uneventful and 1 week postsurgery he achieved an unaided visual acuity of 6/9. Eight months later, he presented with reduction in vision and on examination he was found to have a fibrosed and contracted anterior capsule. He underwent radial YAG laser relaxing capsulotomies using 25 laser shots at an energy of 3.0 mJ. Initially, the patient was able to see 6/9 unaided, but within 2 months further growth of his anterior capsule had occurred with a resulting drop in visual acuity down to 6/60. Subsequently, the patient underwent surgical anterior capsulotomy using microscissors, again restoring his vision to a level of 6/9.

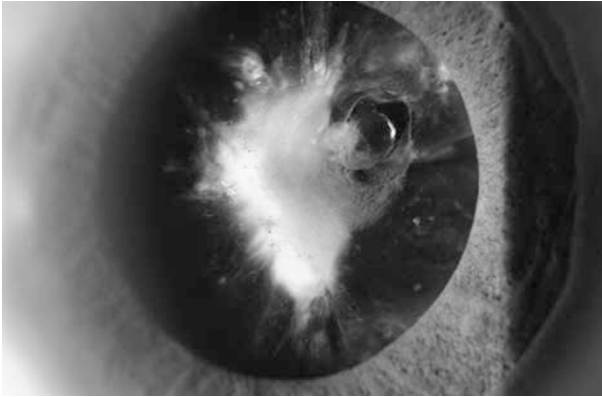


Figure 1 Thickened fibrosed anterior capsule pre punch capsulectomy.

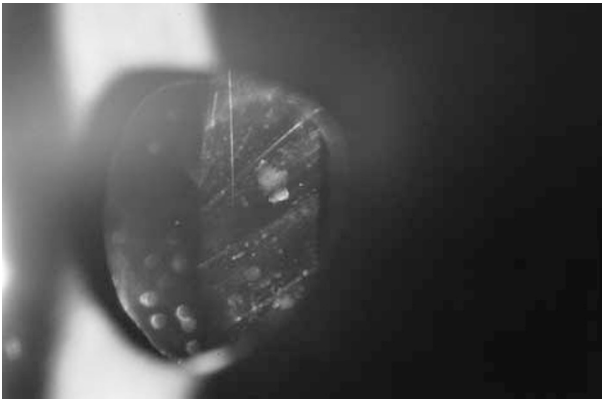


Figure 2 Cleared anterior capsule after using Kelly punch.

Over the following 2½ years, the anterior capsule again became thickened and contracted until the patient's vision dropped to a level of 6/18 (Figure 1a). At this stage, anterior capsulectomy was performed using a Kelly Descemet's membrane punch (Storz) through a 2.5 mm clear cornea incision. Postoperatively, the patient achieved a visual acuity of 6/12 and re-growth of the anterior capsule has not occurred 4 months following surgery (Figure 2).

Surgical technique

Under peribulbar anaesthesia a clear corneal three step incision as for corneal section phacoemulsification was fashioned using a keratome. This resulted in a 2.5 mm internal incision and created a tight but manageable fit for the Kelly punch. With the use of viscoelastic, the anterior chamber was maintained and the thickened 'membrane' was dissected from the anterior surface of the lens. The Kelly punch was then used to remove hemi-oval tissue sections until the fibrosed anterior capsule had been

removed. After removal of the viscoelastic the AC was reformed with balanced salt solution and the corneal wound was hydrated to achieve a self-sealing incision.

Comment

Capsule contraction syndrome is an exaggerated fibrotic response reducing the size of the anterior rhexis of the capsular bag. It was first described by Hanson *et al*¹ and then later by Davison in 1993, who first used the term 'capsule contraction syndrome'.² The condition may cause tilting and decentration of the IOL and in severe cases can even cause complete zonule dehiscence, IOL dislocation and retinal detachment.²

Pathologies such as pseudoexfoliation, uveitis, high myopia, myotonic dystrophy, retinitis pigmentosa and diabetes³⁻⁶ have been shown to be associated with the condition. It can occur with a variety of IOLs, but appears to be most common when a silicone IOL has been used, particularly if plate haptic in design.⁶ Lower rates occur with acrylic lenses, and the least with Acrysof hydrophobic acrylic lenses.⁷ Capsulorhexis size also appears to have an important aetiological role in the condition. If the capsulorhexis is smaller in diameter than the optic of the lens, then contact occurs between the lens biomaterial and the anterior capsule, which leads to the induction of fibrosis and contraction.⁸

Traditionally, the management of capsule contraction syndrome has involved either the YAG laser or performing a surgical capsulotomy. Both techniques involve cutting radial incisions in the anterior capsule to prevent further contraction.^{2,3,9} YAG laser can be performed as early as 2-3 weeks post op but potential complications include damage to the intraocular lens, raised intraocular pressure, and hyphaema secondary to iris haemorrhage.

In our case, both these techniques had been used with initial success to enlarge the capsulotomy. However, subsequently the thick fibrosed anterior capsule returned. Some published reports show the importance of complete removal of the subcapsular fibrosed membrane to prevent recurrence.⁹⁻¹¹ Perhaps the advantage of the Kelly punch is that it allows complete removal, rather than simple division, of the scar tissue.

The Kelly punch is most commonly used in trabeculectomy for performing the sclerostomy.¹² The instrument can be used through a 2.5 mm standard keratome incision and produces clean cut hemi-oval tissue punches 0.75 by 0.5 mm. It allows minimal tissue manipulation by the surgeon and enables removal of tissue blocks that is not easily possible with a blade or microscissors without multiple entry sites.

To our knowledge, this is the first case reported where a Kelly Descemet's membrane punch has been used to

remove a thickened contracted anterior capsule. We have found this to be a safe and effective procedure. This technique may be particularly useful in the management of recurrent anterior capsule contraction where other more traditional methods such as YAG laser capsulotomy have failed.

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