corneal wound is fashioned to explant the implant. The lens is then carefully rotated to deliver one haptic into the anterior chamber (Figure 1c). This haptic is pulled out of the eye using a forceps to explant the lens (Figure 1d). Implantation of another lens can then be subsequently performed (Figure 1e).

## Discussion

One of the surgical challenges of explanting a scleralsutured implant is following the cutting of the sutures; the lens is likely to become loose with the possibility of posterior dislocation of the lens into the vitreous cavity particularly in vitrectomized eyes. Previous literature suggested that the main factor for scleral-fixated IOL stability is the intact trans-scleral sutures.<sup>4</sup>

Pupillary capture of the IOL optic technique has been described before with IOL iris suturing to facilitate the step of suturing the haptic to the iris<sup>5</sup> and for explanting a dislocated iris-fixated IOL into the anterior vitreous.<sup>6</sup> As demonstrated above, we used the same technique in securing the lens optic before cutting the anchoring scleral sutures of the IOL.

This technique is practical and should be easily performed; however, there is a possibility that the pupillary capture would be lost while manipulating the haptic into the anterior chamber particularly in case of a fragile iris or the lack of sufficient miosis. Additional steps that can be incorporated to enhance the safety of this explantation technique may include passing two sutures across the pars plana behind the IOL to serve as a 'sling' or using perfluorocarbon liquid in the vitreous cavity up to the posterior chamber to support the IOL in a vitrectomized eye for those familiar with vitreoretinal surgery.<sup>7</sup>

# **Conflict of interest**

The authors declare no conflict of interest.

## References

- Wagoner MD, Cox TA, Ariyasu RG, Jacobs DS, Karp CL, American Academy of Ophthalmology. Intraocular lens implantation in the absence of capsular support; a report by the American Academy of Ophthalmology. (Ophthalmic Technology Assessment). *Ophthalmology* 2003; 110: 840–859.
- 2 Chang JH, Lee JH. Long-term results of implantation of posterior chamber intraocular lens by sulcus fixation. *Korean J Ophthalmol* 1991; 5: 42–46.
- 3 Por YM, Lavin MJ. Techniques of intraocular lens suspension in the absence of capsular/zonular support. *Surv Ophthalmol* 2005; 50: 429–462.
- 4 Lubniewski AJ, Holland EJ, Van Meter WS, Gussler D, Parelman J, Smith ME. Histologic study of eyes with transsclerally sutured posterior chamber intraocular lenses. *Am J Ophthalmol* 1990; *15* **110**(3): 237–243.
- 5 Chang DF. Siepser slipknot for McCannel iris-suture fixation of subluxated intraocular lenses. J Cataract Refract Surg 2004; 30: 1170–1176.
- 6 Osher RH, Cionni RJ, Snyder ME, Riemann CD, Da Mata AP. Surgical repositioning and explantation of the intraocular lens. *Cataract Surgery*. WB Saunders: Philadelphia, 2004.

7 Lewis H, Sanchez G. The use of perfluorocarbon liquids in the repositioning of posteriorly dislocated intraocular lenses. *Ophthalmology* 1993; 100: 1055–1059.

## M Mikhail<sup>1</sup> and A Sallam<sup>2</sup>

<sup>1</sup>Ophthalmology Department, Royal Victoria Hospital, Belfast Health and Social Care Trust, Belfast, UK <sup>2</sup>Ophthalmology Department, Gloucestershire Hospitals NHS Foundation Trust, Gloucester, UK E-mail: drmok@hotmail.co.uk

*Eye* (2014) **28**, 767–768; doi:10.1038/eye.2014.65; published online 28 March 2014

#### Sir,

## 'Double occlusion': black Artisan iris claw intraocular lens insertion following failed occlusion treatment for intractable diplopia

Black occlusive intraocular lenses (IOLs) are an effective and reversible surgical treatment for intractable diplopia unresponsive to conventional therapy.<sup>1</sup>





**Figure 1** (a) Black Morcher IOL *in situ*. (b) OCT through black Morcher IOL.

It has recently been established that occlusive IOLs have variable light-blocking properties *in vitro*, with some IOLs allowing the passage of infrared light.<sup>2,3</sup> The ability for posterior segment visualisation with light imaging modalities is advantageous; however, patient postoperative satisfaction can be compromised.

This case demonstrates the superior ability of black Artisan iris claw IOL to completely occlude infrared light transmitted by optical coherence topography (OCT) and resolve diplopia compared to black Morcher polymethyl methacrylate (PMMA) posterior chamber IOL in a clinical setting.

# Case report

A 54-year-old man had intractable diplopia despite multiple operations to his right eye, including submacular translocation surgery to correct retinal folds following retinal detachment surgery. He subsequently had cataract extraction and glaucoma tube drainage surgery for secondary raised intraocular pressure.

Visual acuity was 6/36 OD and 6/4 OS, with confusion not amenable to prismatic correction. The patient did not



**Figure 2** (a) Artisan iris claw IOL *in situ*. (b) OCT through black Artisan IOL.

tolerate occlusive contact lenses, and after counselling his preference was for occlusive IOL.

As he was pseudophakic, a black Morcher PMMA IOL was inserted 'piggy back' on his existing clear IOL in the capsular bag using a modified black on clear technique<sup>4</sup> (Figure 1a).

Postoperatively, his visual confusion improved but some symptoms persisted. A 'ghost image' was still visible, which interfered with daily activities. Posterior segment imaging with OCT demonstrated transmission of infrared light through the Morcher IOL, albeit with degraded images (Figure 1b). Subsequent implantation of an occlusive Artisan IOL resolved the patient's symptoms and prevented further transmission of infrared light by OCT (Figures 2a and b).

## Comment

Artisan iris claw occlusive IOL has superior lightblocking properties compared with Morcher PMMA occlusive IOL. This has implications for patient satisfaction following surgery. Artisan IOL is associated with low complication rates<sup>5</sup> and can be implanted to the posterior surface of the iris to give a better cosmetic appearance. Patients should however be counselled about the inability to monitor the posterior segment with light imaging modalities.

## **Conflict of interest**

The authors declare no conflict of interest.

# References

- 1 Wong SC, Islam N, Ficker L. Black occlusive IOLs. Ophthalmology 2007; 114(12): 2365.
- 2 Yusuf IH, Peirson SN, Patel CK. Occlusive IOLs for intractable diplopia demonstrate novel near-infrared window of transmission for SLO/OCT imaging and posterior segment. *Invest Ophthalmol Vis Sci* 2011; 52: 3737–3743.
- 3 Yusuf IH, Peirson SN, Patel CK. Inability to perform posterior segment monitoring by scanning laser ophthalmoscopy or optical coherence tomography with some occlusive intraocular lenses in clinical use. *J Cataract Refract Surg* 2012; **38**(3): 513–518.
- 4 Byard SD, Lee RM, Lam FC, Simpson AR, Liu CS. Black on clear piggyback technique for a black occlusive intraocular device in intractable diplopia. J Cataract Refract Surg 2012; 38(1): 5–7.
- 5 Hassaballa MA, Macky TA. Phakic intraocular lenses outcomes and complications: Artisan vs. Visian ICL. *Eye* (Lond) 2011; 25(10): 1365–1370.

## O Shonibare and J Lochhead

Ophthalmology Department, St Mary's Hospital Newport, Isle of Wight, UK E-mail: bunmis@doctors.org.uk

*Eye* (2014) **28**, 768–769; doi:10.1038/eye.2014.68; published online 28 March 2014