

Explantation of iris-sutured intraocular lens

We describe a simple technique for explantation of iris-sutured intraocular lens that aims to reduce the risk of posterior dislocation of the implant at the time of surgery and minimize iatrogenic iris trauma. This technique involves bimanual rotation of the intraocular lens haptic out of the iris stitch.

Several surgical options are available to correct aphakia in eyes with insufficient capsular support, including iris- or scleral-sutured posterior chamber intraocular lenses (IOLs), iris-claw IOLs, and anterior-chamber IOLs.¹ Long-term results have shown that iris-sutured IOLs are not inferior to scleral fixation or anterior-chamber IOLs.¹ However, iris-sutured IOLs could be associated with complications such as lens tilt and decentration or recurrent iritis, and lens explantation sometimes may be required.^{2,3}

While techniques have been described for iris-sutured posterior-chamber IOLs, there are no published reports regarding methods for explantation. Two major problems are encountered by surgeons attempting explantation of an iris-sutured IOL. First, it is difficult to cut the iris stitch without creating an iris defect. Second, the IOL may become unstable with posterior dislocation of the implant in the vitreous cavity after cutting off the iris sutures.

We describe a simple technique for explantation of iris-sutured IOLs that minimizes the risk of posterior dislocation

of the IOL at the time of surgery and the risk of iatrogenic iris trauma.

An 81-year-old Caucasian male presented to our clinic with monocular double vision for 2 months. Best-corrected visual acuity was 20/40 OD and 20/50 OS. Anterior-segment evaluation of the right eye disclosed a significant IOL tilt and subluxation of a previously iris-sutured IOL with prolapse in the anterior chamber. The nasal haptic was disengaged from the iris, whereas the temporal haptic was still anchored to the iris by a stitch. Anterior-segment examination OS was otherwise unremarkable. Intraocular pressure was 15 mm Hg OD and 21 mm Hg OS. Fundus examination OD and OS was nonrevealing.

The patient underwent pars plana vitrectomy combined with iris-sutured posterior chamber IOL, explantation was done using the technique herein (see Supplementary Video 1, available online). Transscleral fixation of the IOL was then performed using the Yamane technique.⁴ One week after surgery, the IOL was centred, and the patient reported resolution of the double vision.

Following a 25 g pars plana vitrectomy with core vitrectomy, induction of posterior vitreous detachment, and clearing of the vitreous from around the dislocated IOL optic and nasal haptic, we placed two 1 mm corneal paracenteses and filled the anterior chamber with a cohesive ophthalmic viscosurgical device. We then grabbed the dislocated nasal haptic from the vitreous cavity with microforceps and

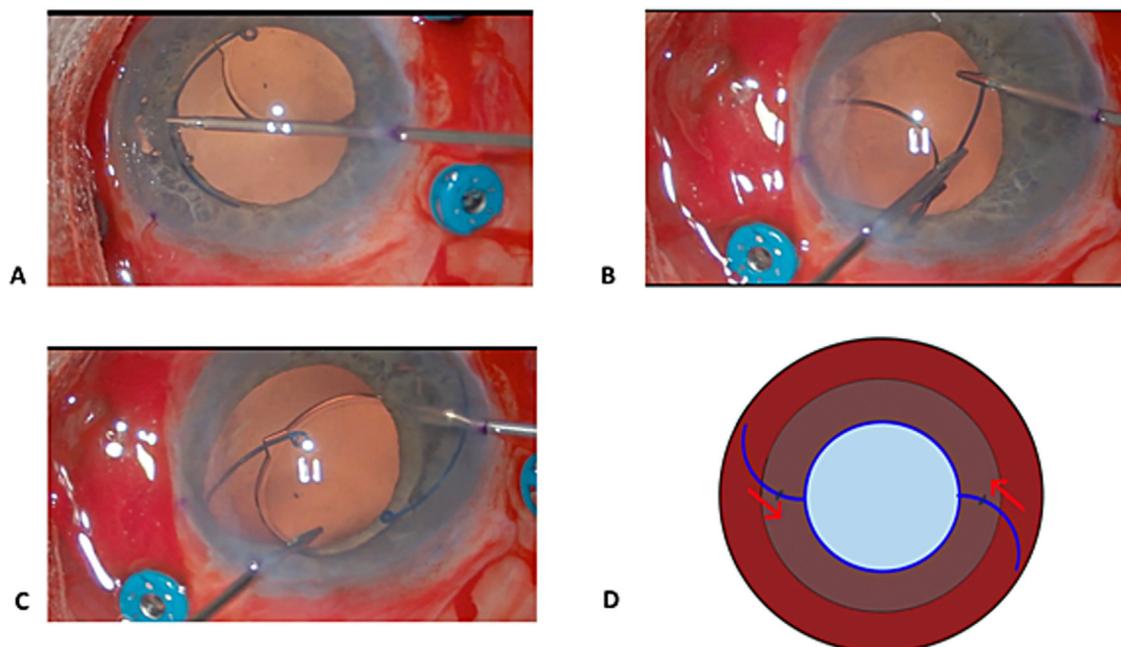


Fig. 1 – (A) Delivery of the dislocated nasal haptic from the vitreous cavity into the anterior chamber. (B) Holding the implant with 2 microforceps near the optic and implant rotation backward to disengage the temporal haptic from the anchoring iris stitch. (C) Rotation of the lens implant into the anterior chamber. (D) Sketch showing the attachment of the haptic to the back of the iris by the anchoring stitch and the direction of rotation to disengage the intraocular lens haptic from the iris and out of the anchoring sutures.

delivered it over the iris into the anterior chamber (Fig. 1A). Attention was then given to the haptic that was still attached to the iris. Using 2 microforceps, we retrieved this haptic from under the iris and hand over hand dialed it backward toward the IOL optic to disengage it from the iris stitch (Fig. 1B, D). We then delivered the disengaged IOL haptic and IOL optic into the anterior chamber (Fig. 1C). In this case, we performed transscleral fixation of the same IOL using the Yamane technique,⁴ but the IOL also could be exchanged if indicated.

Iris-fixed IOLs can be associated with a variety of complications that include pigment dispersion, chronic uveitis, cystoid macular edema, IOL tilt or dislocation, and uveitis-glaucoma-hyphema syndrome.^{2,5} This may lead to the need for explantation of the implant.

One of the surgical challenges of explanting an iris-sutured posterior-chamber IOL is the difficulty of cutting the iris suture holding the implant. The iris is cinched around the haptic, and dissecting the anchoring suture from the iris is difficult and often results in creating an iris defect. Further, following the cutting of the holding suture, the IOL is likely to become loose with a high possibility of posterior dislocation into the vitreous cavity, particularly in vitrectomized eyes.

As demonstrated in this report, we propose holding the IOL haptic with 2 microforceps and rotating the haptic(s) out of the iris stitch without the need for cutting the suture. This technique creates minimal trauma to the iris and is effective in disengaging the IOL haptic from the iris. Because the IOL is held during this technique, it is easy to manipulate into the anterior chamber with a low risk of IOL dislocation in the vitreous.

In summary, we describe a technique for explantation of iris-sutured intraocular implants. The technique is simple, minimally traumatic, and prevents posterior dislocation of the IOL during explantation.

Supplementary Materials

Supplementary material associated with this article can be found in the online version at doi:[10.1016/j.jcjo.2022.07.005](https://doi.org/10.1016/j.jcjo.2022.07.005).

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Footnotes and Disclosure

The authors have no proprietary or commercial interest in any materials discussed in this correspondence.