

Commentary: Intraocular lens explantation techniques

Foldable intraocular lenses (IOLs) may rarely need to be explanted in less than 1% of cases.^[1] The most common cause of IOL explant is dislocated or malpositioned IOLs. In addition, IOL explant may be required in cases with refractive surprise after phacoemulsification, opacified IOLs, and in dissatisfied patients with a suboptimal visual quality or dysphotic symptoms.^[2]

Foldable IOLs may be explanted through small incisions via various techniques. The most commonly performed surgical technique for foldable IOL explant involves prolapsing the IOL in the anterior chamber, cutting the IOL optic with a Vannas/micro scissors and explanting it through an enlarged corneal incision.^[2] However, there is a risk of posterior capsular rupture and vitreous loss during bisection of the IOL optic. Bag dialysis and zonular dehiscence may occur while maneuvering the

IOL into the anterior chamber. The corneal incision needs to be enlarged to explant the IOL fragments, and significant endothelial cell loss may occur while pulling out the fragments.

The authors have used a novel device to enhance the safety of this conventional method of IOL explant.^[3] They have described the use of a 5 mm long modified loop which is introduced in the anterior chamber via a 20-gauge paracentesis incision to ensnare the IOL optic and immobilize it, allowing it to be safely cut in smaller pieces with the help of Vannas scissors while safeguarding the posterior capsule. The IOL fragments may then be explanted via the original corneal incision without need for enlarging it.

Bhaumik *et al.* described refolding the foldable IOL in the anterior chamber and reloading it in a modified IOL cartridge with snare, followed by IOL explant via the original incision.^[4] The limitations of the technique include narrow applicability, as the procedure is not feasible in thick, multi piece or silicone IOLs. In addition, extensive anterior segment manipulations are required to refold and reload the IOL which may be surgically

challenging and lead to complications. In contrast, the modified loop used by the authors do not require IOL reloading and excessive manipulations. Moreover, it is applicable in a wide variety of IOLs.

In cases with delayed IOL explant and fibrosed capsular bag, it may not be possible to mobilize the haptics and the optic may be explanted after cutting off the haptics at the optic-haptic junction.^[5]

Preoperative patient counselling is essential before performing an IOL explant, addressing patient expectations and potential complications. The timing of explant is important, as significant fibrosis of capsular bag may be encountered in late cases precluding successful mobilization of the IOL and subsequent explant. If an explant is deemed necessary, it is ideal to perform it as soon as possible, preferably within 4-6 weeks of primary surgery. The material of IOL assumes importance in selecting the method of IOL explant. Hydrophobic foldable IOLs may be refolded and explanted via the original corneal incision; however, thick, opacified, 3-piece and hydrophilic IOLs need to be cut into smaller fragments before explant.

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Conflicts of interest

There are no conflicts of interest.

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