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## Guest Editorial

# Retropupillary fixated iris claw lens in deficient posterior capsule

Satya Prakash Singh <sup>1,\*</sup>

<sup>1</sup>Dept. of Ophthalmology, Motilal Nehru Medical College, Prayagraj, Uttar Pradesh, India



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Intracapsular intraocular lens remain the best results following cataract surgery but sometimes posterior chamber intraocular lens in the bag cannot be implanted in certain cases. In Case of Aphakia with deficient posterior capsule, posterior chamber IOL dislocation, large posterior capsular rent or inadvertently removal of whole bag during surgery, Marfan syndrome / ectopia lentis, large zonular dialysis, traumatic subluxation/dislocation of crystalline lens, there may be insufficient posterior capsular support for Posterior chamber IOL implantation either in the capsular bag or sulcus.

The available treatment options are anterior chamber intraocular lens, a scleral fixated intraocular lens or an iris fixated IOL. The use of Anterior chamber IOLs within iridocorneal angle has often been reported to cause endothelial cell loss and pseudophakic bullous keratopathy.<sup>1</sup> The scleral fixation of posterior chamber IOLs has several disadvantages such as difficult suture technique, longer surgical time and complications including hypotony, possible intraoperative bleeding, damage to the ciliary body, Choroidal haemorrhage, retinal detachment, vitreous incarceration and cystoid macular oedema.

The Iris Claw lens was designed by Prof. Jan G.F Worst in 1978.<sup>2-4</sup> It was a plano convex type of lens with a circular aperture between optic and haptic. A modified convex-concave version with vaulted design was introduced in 1996 to increase the distance between the IOL and the

corneal endothelium; this model has since been in common use. Iris-claw lenses can be fixated to the iris either in the anterior chamber or in the posterior chamber. However with implantation of Iris claw lens in anterior chamber there is risk of reduction in endothelial cell count which can lead to pseudophakic bullous keratopathy. Anterior vitrectomy was performed with the help of an automated vitrectomy probe if there is a vitreous in the anterior chamber. Intracameral pilocarpine should be injected to constrict pupil and Iris claw IOL is introduced into the anterior chamber through main incision under air to prevent the escape of viscoelastic into the posterior chamber. The haptics of the lens are attached to the midperipheral iris stroma which is immobile, thus allowing the pupil unrestricted ability to dilate and constrict. The technique of retro pupillary iris fixation of iris claw lens which was first reported by Andreas Mohr in 2002, offers several advantages.<sup>5</sup> It combines the benefit of posterior chamber IOL implantation with a low-risk, cost effective.<sup>5</sup> This procedure with less surgical time preserves the anatomy of the anterior segment with respect to position of natural crystalline lens and has cosmetic benefit. Retropupillary fixation of iris-claw lenses enhances stability, prevents tilting of the lens and reduces the glare phenomenon, which is characteristic of the anterior chamber IOL implants.

There are also few disadvantages like disenclavation, pupillary deformity and iris atrophy. Several studies have been done to study the visual outcome, complications, advantages and disadvantages after Retro Pupillary Iris

\* Corresponding author.

E-mail address: [dr.spsingh999@rediffmail.com](mailto:dr.spsingh999@rediffmail.com) (S. P. Singh).

fixated IOL and have been compared to the scleral fixated IOL and anterior chamber IOL.

Retropupillary iris claw lens implantation is a better alternative for scleral-fixed or angle-supported IOL implantation as it is clinically safe, less time-consuming, predictable and effective primary or secondary procedure in cases with deficient posterior capsule or inadequate capsular support.<sup>6</sup> After retropupillary Iris claw lens implantation the complications were minimal with several benefits as compared to scleral fixated intraocular lens and anterior chamber intraocular lens.

### 1. Conflict of Interest


None.

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### Author biography



**Satya Prakash Singh**, Principal & Dean, Moti Lal Nehru Medical College, Prayagraj, (UP), India  
& Director, Regional Institute of Ophthalmology, Prayagraj, (UP), India  <https://orcid.org/0000-0002-0639-3947>

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