



Lens Fixation Today as Easy as it should

Ahmed Galal*

Senior Anterior and Posterior Segment Surgeon, Augenklinik Regensburg,
Barmherzige Brüder Hospital, Prüfening, Regensburg, Germany

***Corresponding Author:** Ahmed Galal, Senior Anterior and Posterior Segment Surgeon, Augenklinik Regensburg, Barmherzige Brüder Hospital, Prüfening, Regensburg, Germany.

Received: January 07, 2021

Published: January 30, 2021

© All rights are reserved by **Ahmed Galal**.

Today, both Aphakic eyes problem and defective intraocular lenses replacement problem, have changed considerable since the Yamane described secondary IOL implantation using intrascleral fixation of a sulcus-based 3-piece IOL with haptics-end modification by applying high-temperature cautery to create bulbous flanged tips. This method has replaced worldwide the use of scleral flaps, scleral sutures, glued intraocular lenses or any other lenses model such as Artisan Iris claw lenses to address the problem of Aphakia in general. As this technique matured along the last few years, the use of the other methods is becoming each day less. The easy of this technique and the familiarity of the anterior segment surgeon with such manipulations, made it easy for the Yahame technique to become today the surgery of choice for such cases. A conjunctival peritomy is not necessary but careful marking the needles entry points is mandatory. Placing a mark 1.5-2 mm posterior the limbus and both are exactly allocated in a line with the pupil center, ensures haptic placement exactly 180 degrees will provide excellent centration. Then one 27-gauge needle is bent in line with the bevel approximately 6-8 mm long from the tip. A CT LUCIA 602 ZEISS which is an acrylic hydrophobic 3-piece IOL with Polyvinylidene fluoride (PVDF) monofilament haptics is in current use. A ZEISS R28 IOL Delivery System (ZEISS Z28 Cartridge IOL Delivery System) would be used to deliver the folded IOL in the anterior chamber. Both are from Carl ZEISS Meditec, Jena Germany.

As the lens is prepared in its ZEISS IOL Delivery System a 2.8-mm clear corneal incision (CCI) at steepest meridian is preformed to decrease pre-operative astigmatism. Two paracenteses are oriented 90 degrees from the main CCI as entry for intraocular forceps disposable high-temperature cautery is used to melt the haptic tips to create a flange.

Once the LUCIA IOL is inserted into the anterior chamber, the trailing haptic is left outside the eye from the incision. First intra-

scleral tunnel is created with a 27-gauge needle using the left hand. Needle is advanced through conjunctiva and sclera parallel to the Iris plan. When it enters the posterior chamber, the needle is directed toward the pupil center and the leading haptic is guided using an intraocular forceps into the needle. With the haptic secured and correctly docked into the needle followed by withdrawal of the later, results in the haptic being seen exteriorized from the left scleral tunnel which should be immediately grasped with a forceps and high-temperature cautery using single-use Cautery Pen (Bovie, AARON Medical) with its Platinum tip reaching approximately 1200°C, is applied to create bulbous flanged haptic-tip. and a similar procedure can be performed on the trailing haptic this time using the right hand to advance the needle. The flanged haptics are then re-tucked into the scleral tunnels leaving the flanged-tips subconjunctival. Procedure ends by injecting intracameral antibiotic and Miochol after carefully testing the position of the externalized haptic-tips and optimizing the IOL centration to avoid post-operative decentration or displacement.

After a short learning curve of this genuine technique, the procedure of IOL implantation should take no more than 5-8 minutes which makes it a perfect combination method to other ocular surgeries such as Keratoplasty, DMEK or even in Vitrectomy procedure [1-12].

Bibliography

1. Wylęgała E and Tarnawska D. "Management of pseudophakic bullous keratopathy by combined Descemet-stripping endothelial keratoplasty and intraocular lens exchange". *Journal of Cataract and Refractive Surgery* 34 (2008): 1708-1714.
2. Yamane S., et al. "Sutureless 27-gauge needle-guided intrascleral intraocular lens implantation with lamellar scleral dissection". *Ophthalmology* 121 (2014): 61-66.

3. Edward L Randerson., *et al.* "Clinical Outcomes and Lens Constant Optimization of the Zeiss CT Lucia 602 Lens Using a Modified Yamane Technique". *Clinical Ophthalmology* 14 (2020): 3903-3912.
4. Priya Narang and Amar Agarwal. "Glued intrascleral haptic fixation of an intraocular lens". *Indian Journal of Ophthalmology* 65.12 (2017): 1370-1380.
5. Zhi-Xiang Hu., *et al.* "Sutureless Intrascleral Haptic-Hook Lens Implantation Using 25-Gauge Trocars". *Journal of Ophthalmology* 2018 (2018): 9250425.
6. Helena Yuri Kurimori., *et al.* "Adjustments of haptics length for tilted intraocular lens after intrascleral fixation". *American Journal of Ophthalmology Case Reports* 10 (2018): 180-184.
7. Maxwell S Stem., *et al.* "Scleral-Fixated Intraocular Lenses: Past and Present". *Journal of VitreoRetinal Diseases* 1.2 (2017): 144-152.
8. Avner Hostovsky., *et al.* "Secondary Posterior Chamber Intraocular Lens Fixation Using Flanged Prolene Sutures as an Alternative to an Anterior Chamber Intraocular Lens Implantation". *Clinical Ophthalmology* 14 (2020): 3481-3486.
9. Yuan Yang., *et al.* "A modified intrascleral intraocular lens fixation technique with fewer anterior segment manipulations: 27-gauge needle-guided procedure with built-in 8-0 absorbable sutures". *BMC Ophthalmology* 19 (2019): 234.
10. Karolinne Maia Rocha., *et al.* "Combined flanged intrascleral intraocular lens fixation with corneal transplant". *American Journal of Ophthalmology Case Reports* 13 (2019): 1-5.
11. Daliya Dzhaber., *et al.* "Outcomes and complications of iris-fixated intraocular lenses in cases with inadequate capsular support and complex ophthalmic history". *Eye (Lond)* 34.10 (2020): 1875-1882.
12. Yusaku Miura., *et al.* "Comparison of Different IOL Types in the Flanged IOL Fixation Technique". *Journal of Ophthalmology* (2020): 8534028.

Assets from publication with us

- Prompt Acknowledgement after receiving the article
- Thorough Double blinded peer review
- Rapid Publication
- Issue of Publication Certificate
- High visibility of your Published work

Website: www.actascientific.com/

Submit Article: www.actascientific.com/submission.php

Email us: editor@actascientific.com

Contact us: +91 9182824667