

Eyeglasses Sutured Intraoculares to Iris. Presentation of Four Cases

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Received: July 03, 2017; **Published:** August 09, 2017

Abstract

Objective: To present four cases with traumatic or surgical aphakia and optical correction with intraocular lens sutured to iris.

Material and Method: Four patients with a diagnosis of aphakia, one with a traumatic cause and three with surgery are presented. The uncorrected visual acuity was recorded in all cases of hand movement at 1 meter; they were implanted secondary intraocular lens folding posterior chamber sutured to iris. In the biomicroscopic examination in slit lamp, we observed a mean paralytic mydriasis in case 1, dynamic refraction of spherical +11.00 (0.6), case 2 a refraction of spherical +12.00 (0.4), case 3 +9.00 sph (1.0) and Case 4 +10.00 sf (1.0) respectively. All biomicroscopic examination was performed without alteration except for case 2 with partial hemorrhaging.

Results: At the month of surgery, all patients achieved a better corrected visual acuity of the vision unit, except for case 2 that reached 0.8. The Complications presented were ovalization of the pupil and deposits of iris pigments in the intraocular lens.

Conclusions: The secondary implant of intraocular lens of posterior capsule sutured to the iris, is a surgical option in patients with diagnosis of traumatic or surgical aphakia without capsular support.

Keywords: *Folding Lens; Aphakia; Iridium Fixation*

Introduction

In aphakia secondary to trauma or complications associated with lens surgery, there are surgical options to correct it, among them are: anterior chamber lenses with angular support, iridian anterior chamber lenses; Iris sutured posterior chamber lenses and sulcus sutured posterior chamber lenses. For all of these options, it is necessary to take into account variables such as: corneal state, corneal endothelial cell density, irido-endothelial-corneal angle, iris status, inflammation, glaucoma coexistence or not, lens availability, Surgeon in addition to the patient's age [1,2].

The fixation of intraocular lenses to iris arises since 1979 where Peyman [3] performs an experimental study in which he uses various types of sutures for the fixation of intraocular lenses (IOLs) to iris. All these attempts were to suture these lenses to iris in the anterior chamber; in the absence of viscoelastics and biodegradable sutures, so the technique became very difficult and there were no good results [4].

In 1978, Jan Worst developed a type of iridial lens for the correction of aphakia following intracapsular cataract surgery. This lens, now called Artisan[®] apaquia, and initially known as iris-claw lens is another surgical option for the correction of aphakia [5].

Case Presentation

Case 1

Male patient, 46 years old. He suffered a blunt trauma in the left eye in 2015 that caused traumatic dislocation of the lens to the anterior chamber, which was treated in the emergency department where it is decided to remove the lens.

At the year of the surgery, the patient was asked to evaluate the intraocular lens secondary implant. In the ophthalmologic exam of the left eye, visual acuity without visual correction (AVs/c) of hand movement at one meter was verified in the biomicroscopic exam in the lamp. Slit was observed mean mydriasis paralytic, dynamic refraction of +11.00 (0.6) and normal ocular tension. Indirect ophthalmoscopy without alteration. It was decided to perform a folding iris lens fixation in a patient with traumatic aphakia and absence of capsular support, by one of the techniques most used by other authors [6,7]. A modification is made by the author of this work, which consists of Previously tying the collapsible lens in the anterior chamber and thus decreasing the lens off-center and the risk of vitreous dislocation during the procedure.

Description of the Technique

Step 1 (Figure 1): Two paracentesis are performed at hour 12 and hour 6 where a polypropylene suture 10 - 0, 10 cm, with spatulated needle, 0.15 mm in diameter, 16 mm in length, straight or curved, Double armed. The collapsible intraocular lens is injected through a 3.2mm incision over the suture.

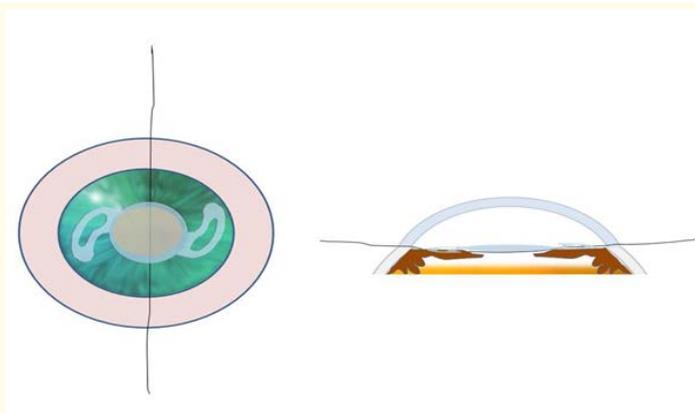


Figure 1: Suture and anterior chamber intraocular lens are observed.

Step 2 (Figure 2): The lens is centered and the optic is fixed with Siepser's knot, being suspended by the suture that serves as a support, preventing the lens from decoupling or luxation to vitreous cavity during the fixation, since the cables At 12 o'clock and 6 o'clock they allow to hold it and to reposition it.

Step 3 (Figure 3): The haptics are sutured in hour 3 and hour 9.

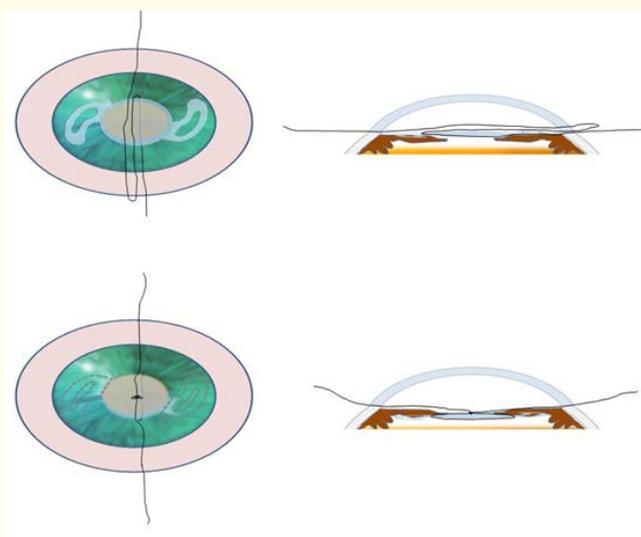


Figure 2: Stepser knot.

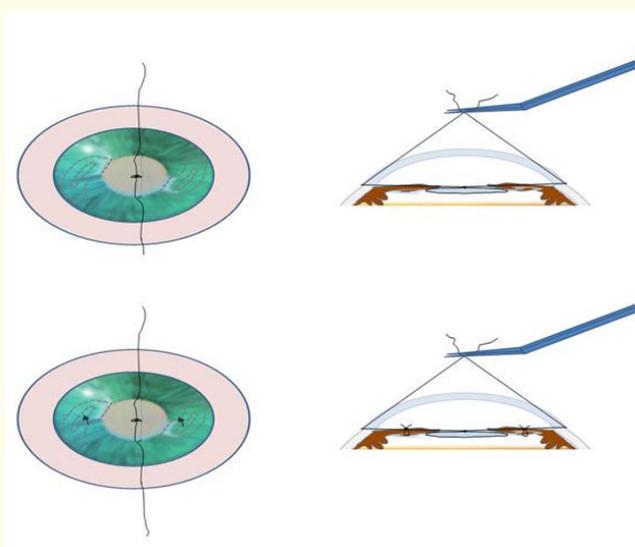


Figure 3: Suture that serves as a support to later fix the haptics.

Step 4 (Figure 4): The suture by which the lens is held in position is cut.

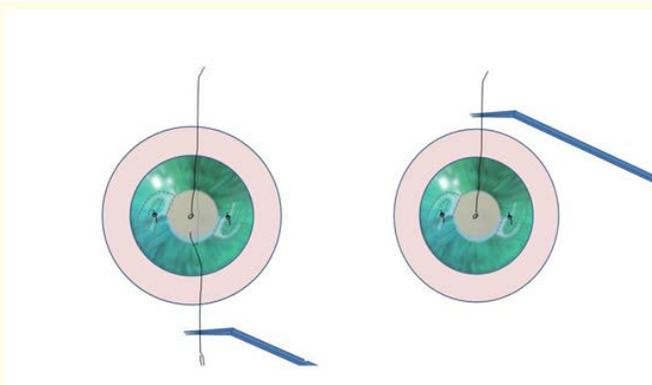
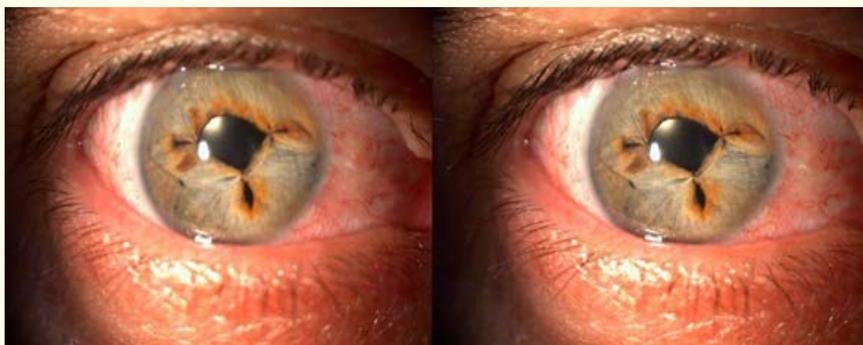


Figure 4: The suture is cut.

Case 1 in which it was necessary to perform a previous pupiloplasty due to the mean paralytic mydriasis.



Figures 5: The postoperative of the patient is observed after 7 days of surgery.

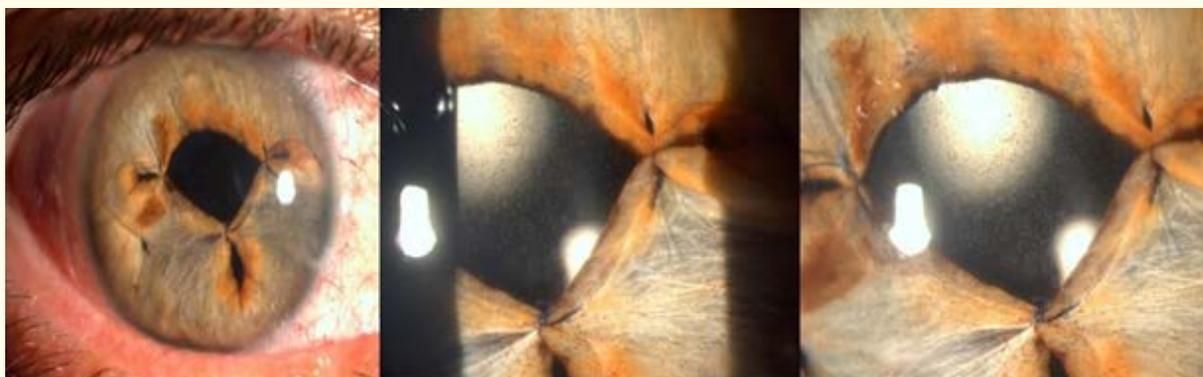


Figure 6: Ovalization of the pupil and iridium pigment deposits in the intraocular lens.

Case 2

Patient of 85 years operated of total cataract in January of 2017 of Right Eye (OD). At positive ophthalmological examination we found AVs / c counting fingers at 1 meter with a RD +12.00 spherical (0.4). The biomicroscopic examination in the slit lamp shows aphakia, iridodialysis from 12 to 3 hours, and in indirect biomicroscopy a partial hemocytre. A posterior intraocular lens implant of the posterior capsule sutured to iris is performed, figure 7.

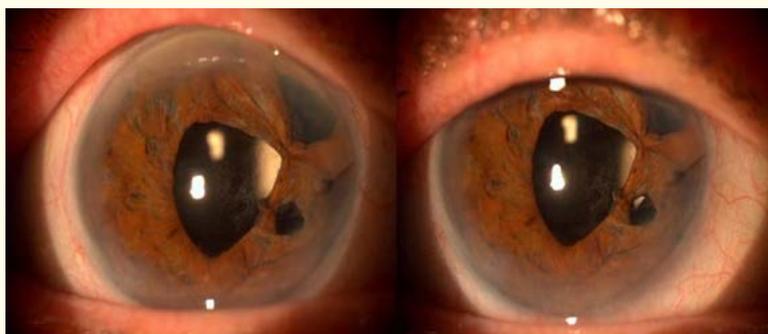


Figure 7: Two photos of the patient are shown at 7 days of surgery. Iridodialysis, pupiloplasty and the sutured iris lens are observed.

The patient at the month of surgery achieved an AVs/c of 0.4 and with an RD: -0.50-1.00 x 85 0.8.

Case 3

An 83-year-old patient attending the clinic with a diagnosis of surgical aphakia of the 6-month postoperative period. Positive ophthalmologic examination in slit lamp shows a hand movement AVs/c at 1 meter, a RD: +9.00 sf (1.0) (Figure 8). A secondary implant is performed with intraocular lens fixation sutured to the iris.

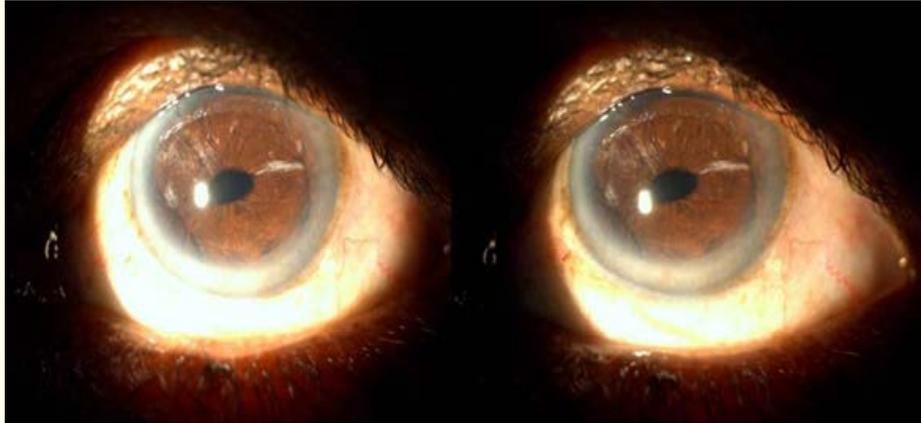


Figure 8: Two images of the postoperative are shown at 7 days of evolution. A central, slightly oval pupil is observed.

The month of surgery reached AVs / c 0.5 and a RD: -0.75-0.25 x 30 1.0.

Case 4

A 42-year-old patient underwent right-sided cataract surgery in September 2016. The ophthalmologic examination revealed a surgical ophthalmic cleft lamp, AVs / c counts finger at 1 meter, RD: +10.00 sf (1.0). Sutured intraocular lens fixation is performed on iris (Figure 9).

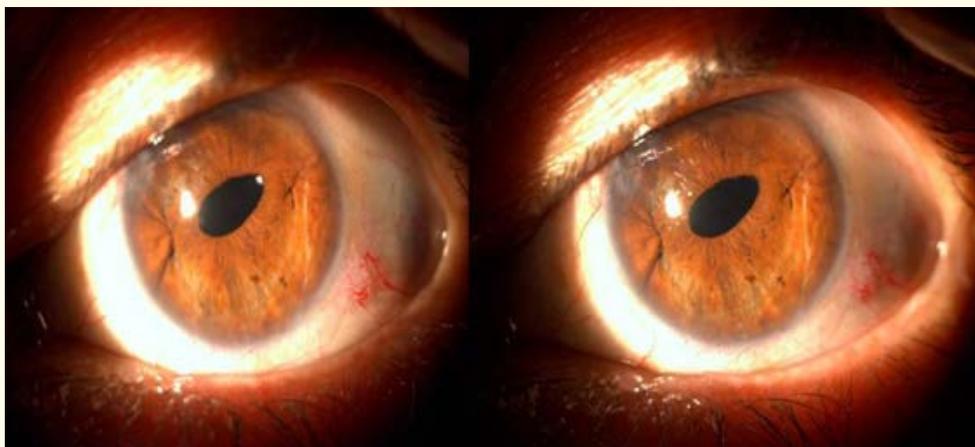


Figure 9: Postoperative of 7 days, slightly oval and central pupil.

In the postoperative period of the month reached AVs / c 0.6, RD: -0.50-1.25X30 1.0 and few iris pigments in the intraocular lens.

Discussion

In 1993 Hoh [9] published a study of iridium fixation of lenses in the posterior chamber in 19 cases, evaluating visual outcome, presence of corneal edema, glaucoma, cystoid macular edema, retinal detachment, endophthalmitis and dislocation or tilting of the intraocular lens. In 1994, the results of 30 cases were published, in which similar parameters were analyzed and in both investigations the improvement of the visual acuity could be verified [10].

Condon [11,12] it proposes to suture folding lenses to iris in posterior chamber by small incisions. In later years different suturing techniques have been studied with the aim of simplifying the surgical technique, improving the postoperative result with better intraocular lens centering and avoiding possible tilting [13,14].

The modified McCannel technique rear-chamber lenses suture haptics to the iris at the mid-periphery, use lens optics for support [12].

The variant proposed by the author of this work has as advantages that is realized by a smaller incision, does not require a complete anatomy of the iris, it allows to reconstruct the iris initially and later to place the lens. By holding the intraocular lens with the suture allows you to center it before fixing it, which minimizes postoperative decontamination. There is less postoperative corneal edema because the surgical time oscillates between 20 and 25 minutes once the details of the technique are known, it is necessary a surgeon with certain surgical skills. Also during the fixation of the lens viscoelastic is used throughout the surgery and there is no constant output of fluids, minimizing the loss of endothelial cells responsible for maintaining corneal transparency, an important element to keep in mind that these patients who have undergone an or More intraocular surgeries.

For the above described, we consider that it is a surgical option for those patients with a diagnosis of aphakia and when we do not have the availability of lenses designed for the correction of aphakia.

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Volume 7 Issue 5 August 2017

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