

Contact Lens Considerations for an Aphake with Urretz-Zavalia Status Post Intraocular Lens Dislocation and Removal

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Introduction:

This case report illustrates a patient with post cataract extraction complications including aphakia, irregular astigmatism and Urretz-Zavalia Syndrome (UZS), a post operative complication after a penetrating corneal procedure, but has been also documented after cataract extraction, that results in a fixed, dilated pupil. The patient was fit in a scleral contact lens for optimal vision.

Case History:

An 81-year-old male was referred by his cornea specialist to Nova Southeastern Eye Institute for a contact lens evaluation of the right eye. He had a recent history of cataract extraction of both eyes with post-operative complications of the right eye including hyphema and corneal edema caused by a dislocated intraocular lens (IOL). Following this, the IOL was removed, and the patient was left aphakic due to his development of UZS and iris atrophy. He was left with four corneal sutures inducing asymmetric irregular astigmatism.

Pertinent Findings:

	OD	OS
DVA:	CF 4ft	20/20
Pupils:	Surgical pupil, fixed and dilated	Round, reactive to light, (-) reverse APD
CVFs	FTFC	FTFC
EOMs:	FROM (-) pain	FROM (-) pain
Slit Lamp Exam:	OD	OS
Conjunctiva:	Trace injection	White and quiet
Cornea with Sodium Fluoresceine (NaFl):	Four temporal sutures, blood spots on endothelium s/p resolved hyphema	Normal endothelium, epithelium, stroma, and tear film
Anterior Chamber:	Deep and quiet	Deep and quiet
Iris:	Temporal iris atrophy	Iris normal
Lens:	Aphakia	PCIOL well centered

Anterior Segment Photos:



Figure 1: Anterior Segment Photography OD



Figure 2: Anterior Segment Photography OD

Ancillary Testing:

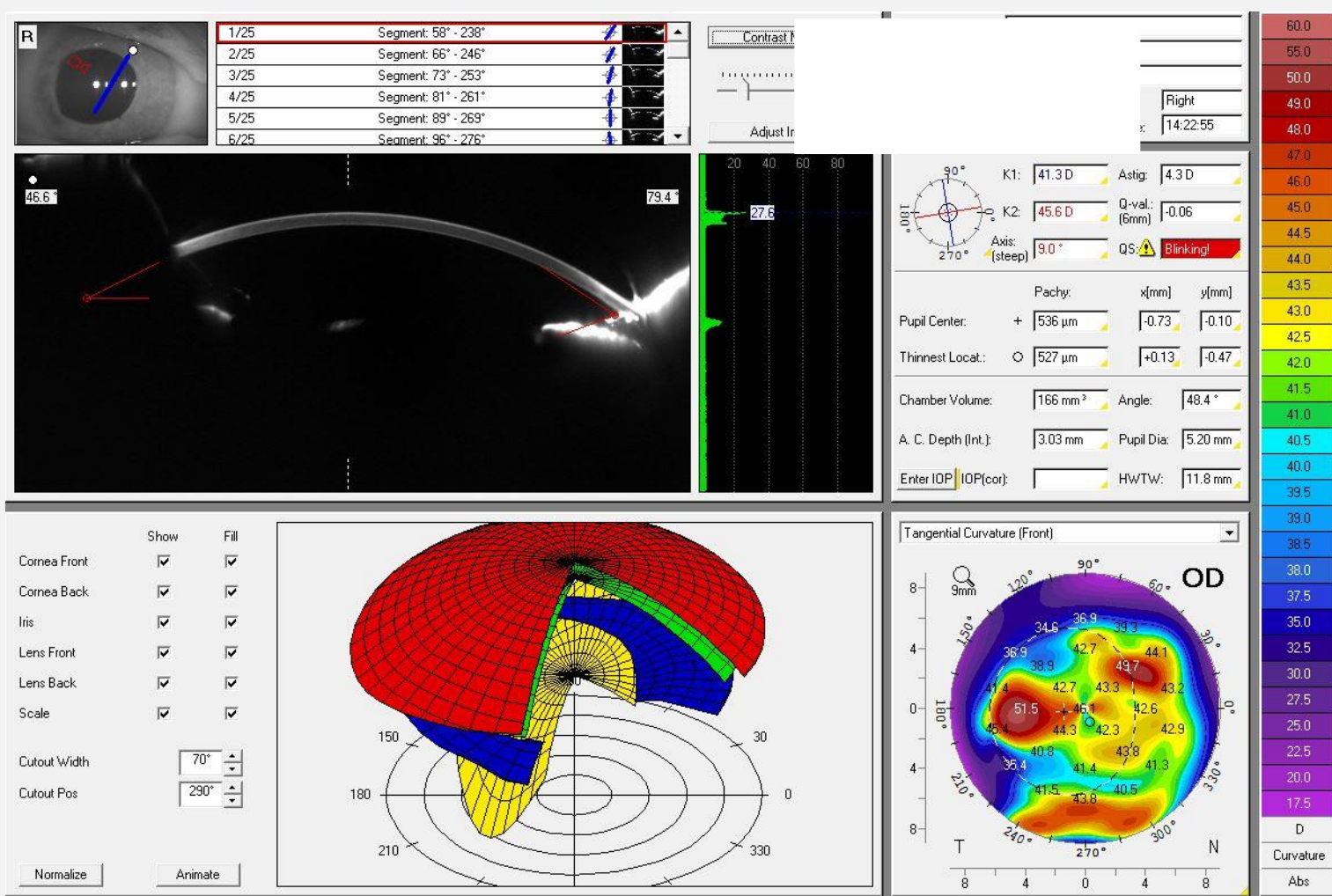


Figure 3: Corneal Topography OD

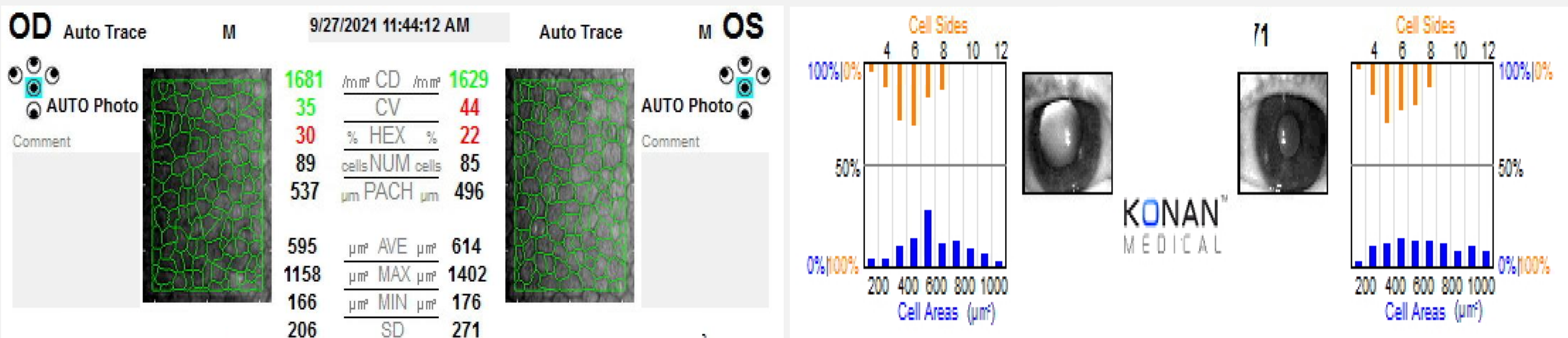


Figure 4: Specular Microscopy

Contact Lens Fitting:

Diagnostic Lens: Blanchard Labs, One Fit:

OD:	-0.50 sph	8.20	14.9	Limbus: STD	Edge: STD	CT: 0.25mm	OExtra
ORx: +13.00 -0.75 x 090; 20/25, OExtra: Contamac™ Optimum Extra (Dk 100)							

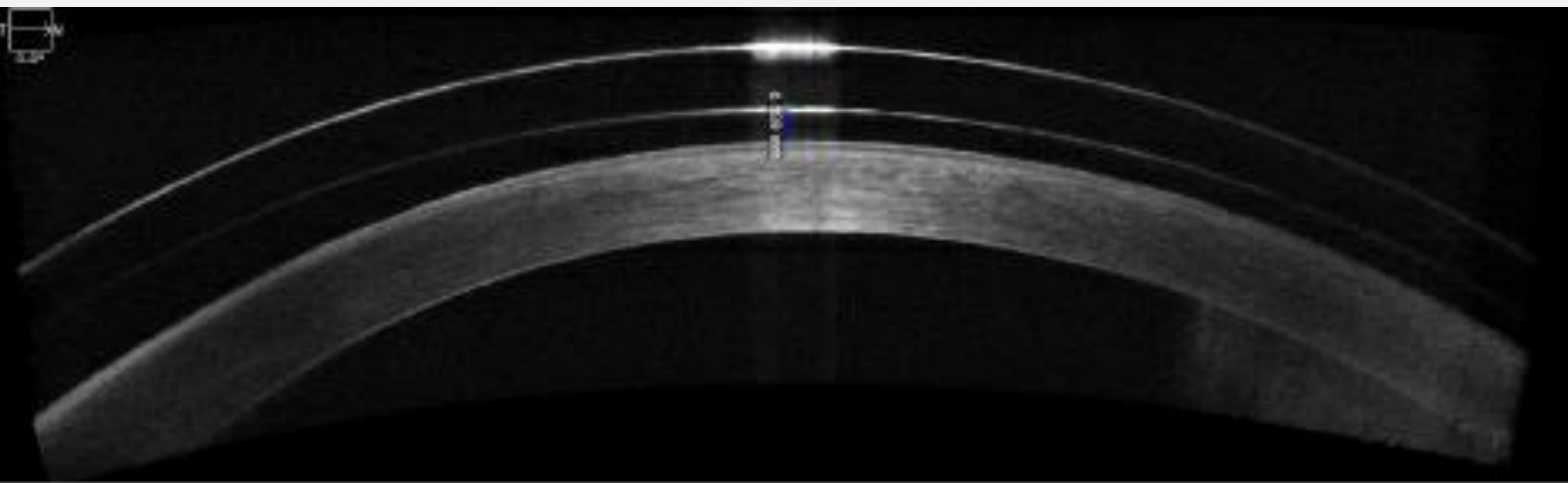


Figure 5: Anterior Segment OCT with Diagnostic Lens with Adequate Apical Clearance

Ordered Lens: Blanchard Labs, One Fit:

OD:	+15 sph	8.20	14.9	Limbus: XLC	Edge: STD	CT: 0.53mm	OInfinite
ORx: +0.25; 20/125, OInfinite: Contamac™ Optimum Infinite (Dk 180)							

Results:

The patient was successfully fit in a scleral lens with an over-refraction of +13.00 sph, with a best corrected visual acuity (BCVA) of 20/25. The patient reported the lens to be relatively comfortable and marked improvement in his vision.

Discussion:

Hyper Dk gas permeable lenses and scleral lenses were both explored as contact lens options. Due to the exposed corneal sutures, fixed, dilated pupil and topography pattern, a scleral lens with a large optic zone was determined to be the best option. A scleral lens could vault the exposed sutures and stabilize on a cornea with irregular astigmatism. The large optic zone would provide best possible vision for a patient with a fixed, dilated pupil. An endothelial cell count was taken confirming adequate endothelial cell count. The lens was ordered in hyper Dk material (180Dk) due to the patient's corneal compromise and high prescription.

Unfortunate Follow-up:

At a follow-up visit, the patient presented with reduced vision with the scleral lens on. BCVA with the scleral lens was 20/125. A macular OCT revealed significant macula edema. The scleral lens did in fact help to image the significant macula edema and aided in the prompt referral back to his ophthalmologist for management. The patient eagerly awaits resolution so he can get back into the lens.

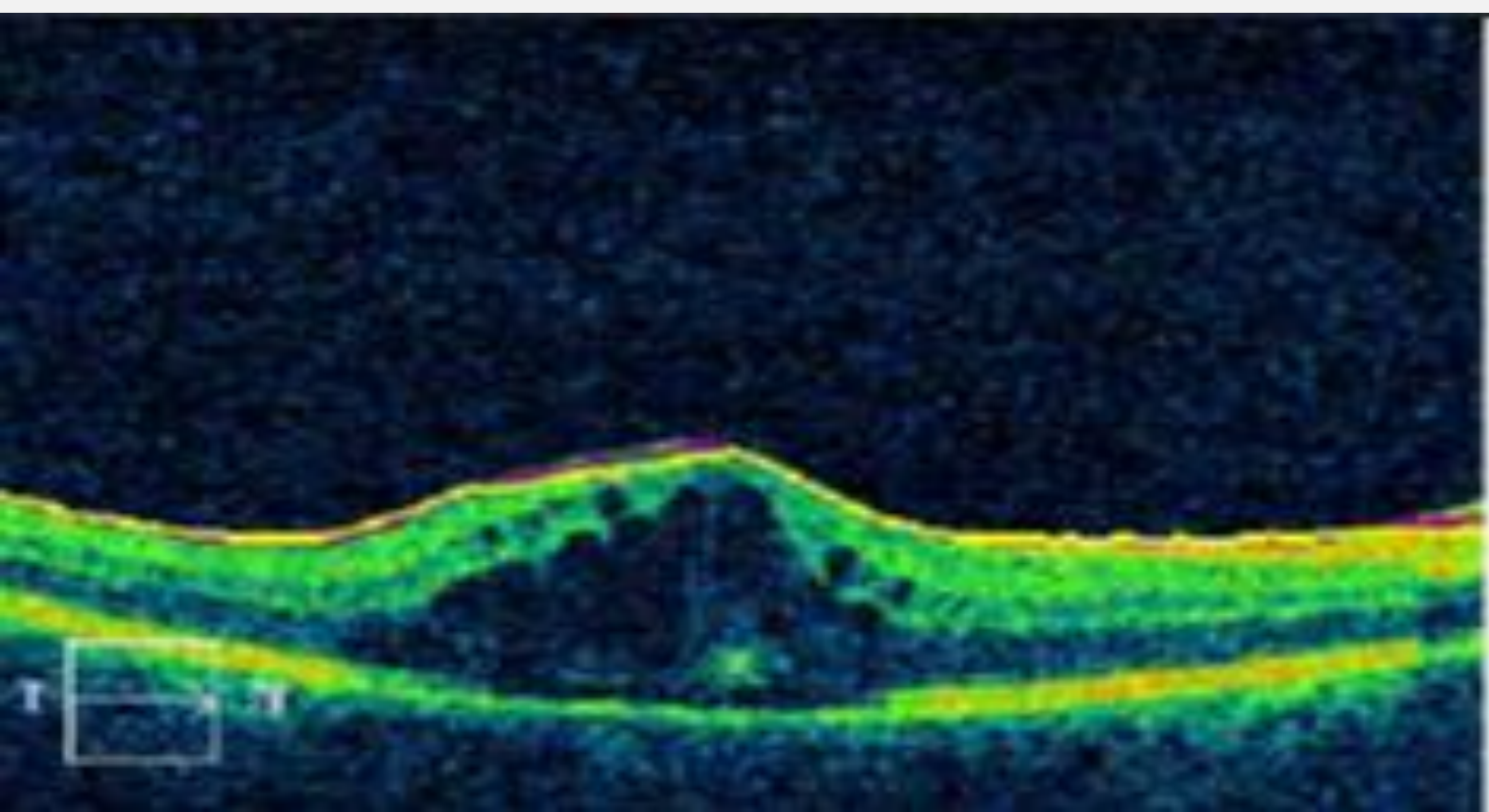


Figure 6: Macular OCT through scleral lens OD

Conclusions:

In peer-reviewed literature the incidence of complications after cataract surgery ranges between 2-14.7%,² and the overall incidence of postoperative aphakia in which the aphakia was not planned is 0.65%.¹ While this number is relatively low, it is imperative that clinicians know what contact lens options are available to their patients and the specific parameters that need to be modified for a proper and healthy fit.

References:

- Lundström M;Bregé KG;Florén I;Lundh B;Stenevi U;Thorburn W; "Postoperative Aphakia in Modern Cataract Surgery: Part 2: Detailed Analysis of the Cause of Aphakia and the Visual Outcome." Journal of Cataract and Refractive Surgery, U.S. National Library of Medicine, <https://pubmed.ncbi.nlm.nih.gov/15474823/>.
- Pulido, Daniela, et al. "Incidence of Intraoperative Complications in Cataract Surgery Performed by Residents. the Mexican Experience." *Investigative Ophthalmology & Visual Science*, The Association for Research in Vision and Ophthalmology, 22 Apr. 2011, <https://iovs.arvojournals.org/article.aspx?articleid=2354200>.