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The evolving story of Phakic IOLs
What is new?
Hanan El-Ghoneimy, M.D.
MIOR



- *For corrections beyond the range of corneal refractive procedures*

CLE

Phakic IOL

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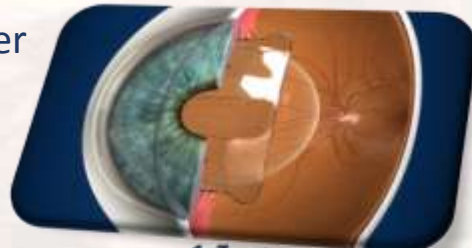
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- It was not until the mid-1980s Dr. Fyodorov began experimenting with a collar-button, pupil-fixated posterior chamber implant that ultimately led to the development of the Implantable Contact Lens (ICL; STAAR Surgical)

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- Iris-fixated
- Posterior chamber

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- *Reserve corneal tissue AND natural lens*
- *Reversible Safe and predictable*
- *Age 19-45 with stable refraction*



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- **ACD** (endothelium to anterior lens surface) **2.8mm-3mm**
- Endothelial cell count **>2500/mm²**
- Normal Iris and pupil configuration

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Power calculation

- Refraction and spectacle power
- ACD
- K readings

- WTW measurement

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Artisan /Verysise

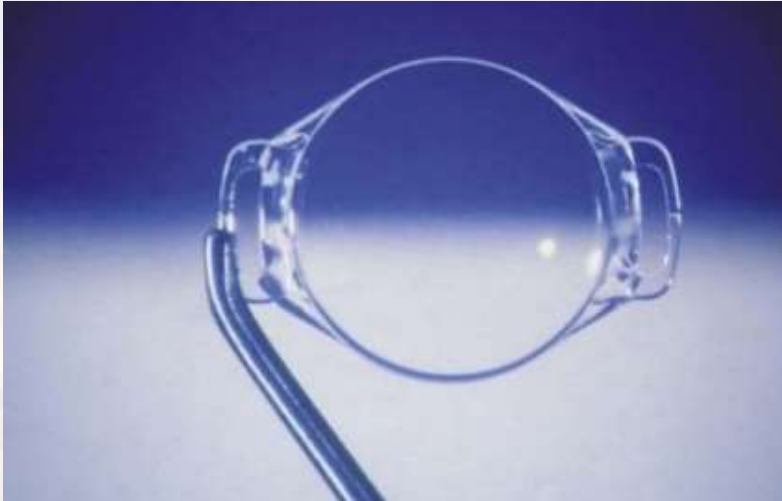




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A 3D cutaway illustration of a human eye, showing the internal structures including the iris, lens, and retina. A clear, circular lens implant is positioned in the center of the eye, surrounded by a ring of support structures. The eye is set against a dark blue background.



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A pair of clear, modern glasses with a thin frame and temples. The lenses are large and clear, reflecting light. The glasses are set against a dark blue background.



Post operative complications

FLAT ANTERIOR CHAMBER

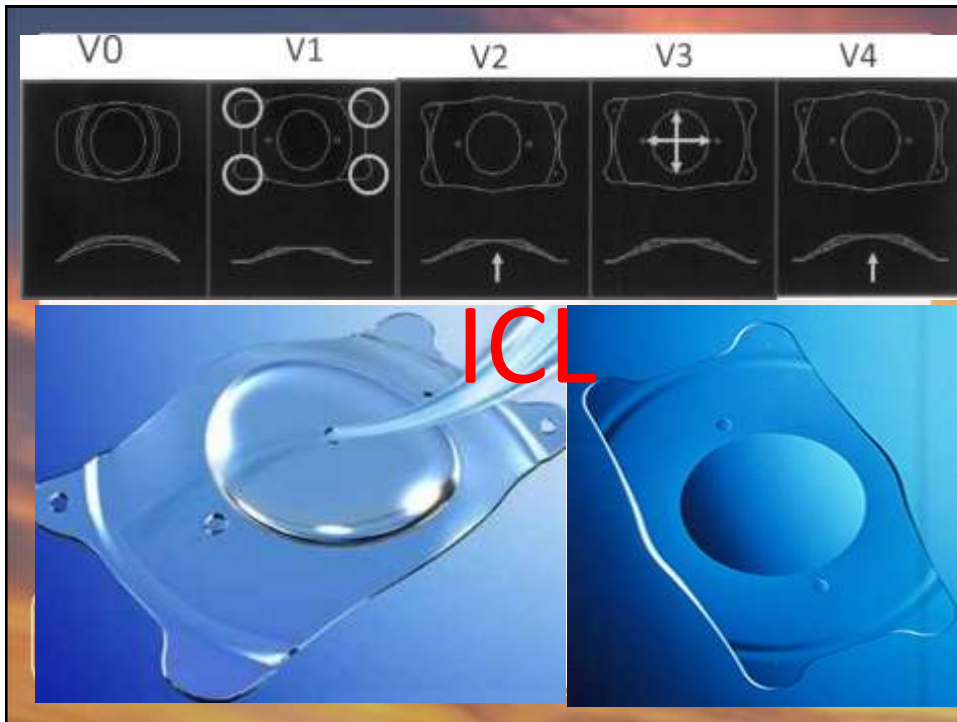
Corneal edema

- Flat anterior chamber
- High IOP
- Halos and glare
- Induction of astigmatism
- Cataract
- Endothelial cell loss
- **Lens luxation**
- Uveitis
- Endophthalmitis

HIGH IOP

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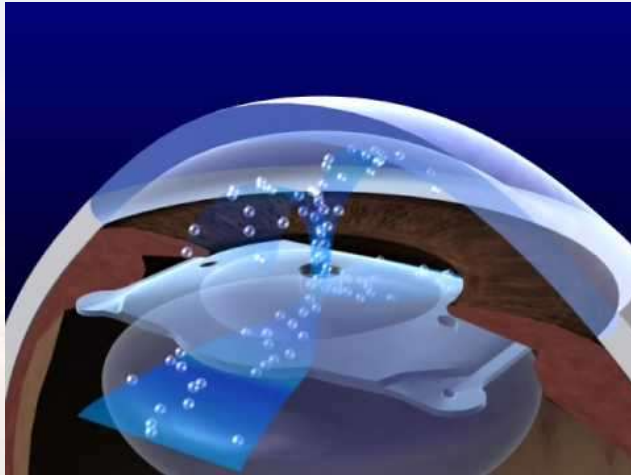
- The Visian 4c Implantable Collamer Lens
- Made of a *collamer* that is highly biocompatible
- Collagen copolymer 0.4% , polyhydroxy methyl methacrylate 60% , *water* 37% , benzophene 3.3%

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ICL sizing is extremely important to get suitable vault

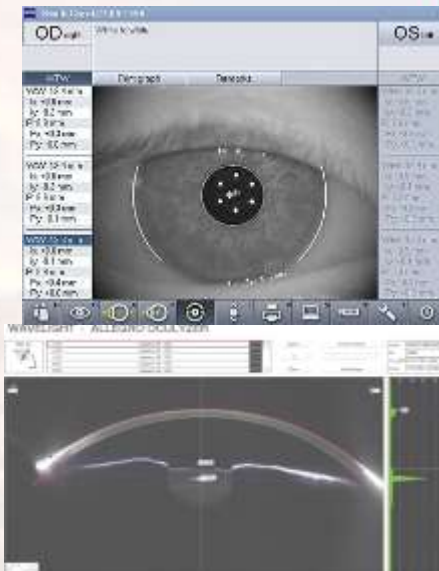


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WTW



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Memorial Institute of Ophthalmological Research
Investigations Unit

المعهد التذكاري للأبحاث الرمدية بالجيزة
وحدة الفحوصات

OCULUS - PENTACAM Scheimpflug Images

1.125	Segment 01 230	2
1.125	Segment 02 230	2
1.125	Segment 03 247	2
1.125	Segment 04 230	2

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Available online at www.sciencedirect.com

ScienceDirect

Journal of Ocular Pathology and Inflammation 24 (2017) 1–6

Original research

Adjustment formulae to improve the correlation of white-to-white measurement of the ciliary sulcus diameter by ultrasound biomicroscopy

Seyed Javad Hashemian^{a,*}, Majid Mohobbi^b, Mehdi Yasari^c, Mohammad Ebrahim Jafari^d, Shadrokh Nabili^e, Seyed Mahyar Hashemian^f, Mahsa Sadat Hashemian^g

^a Eye Research Center, Rasool Akram Hospital, Iran University of Medical Sciences, Tehran, Iran
^b Biostatistics Department, Shiraz University of Medical Sciences, Shiraz, Iran
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^d Shahid Beheshti University of Medical Sciences, Tehran, Iran
^e School of Pharmacy, International Campus, Shiraz University of Medical Sciences, Shiraz, Iran

Received 16 October 2017; revised 21 November 2017; accepted 20 November 2017

May 17, 2018
00:40:42

11.80 mm
11.11 mm
11.00 mm

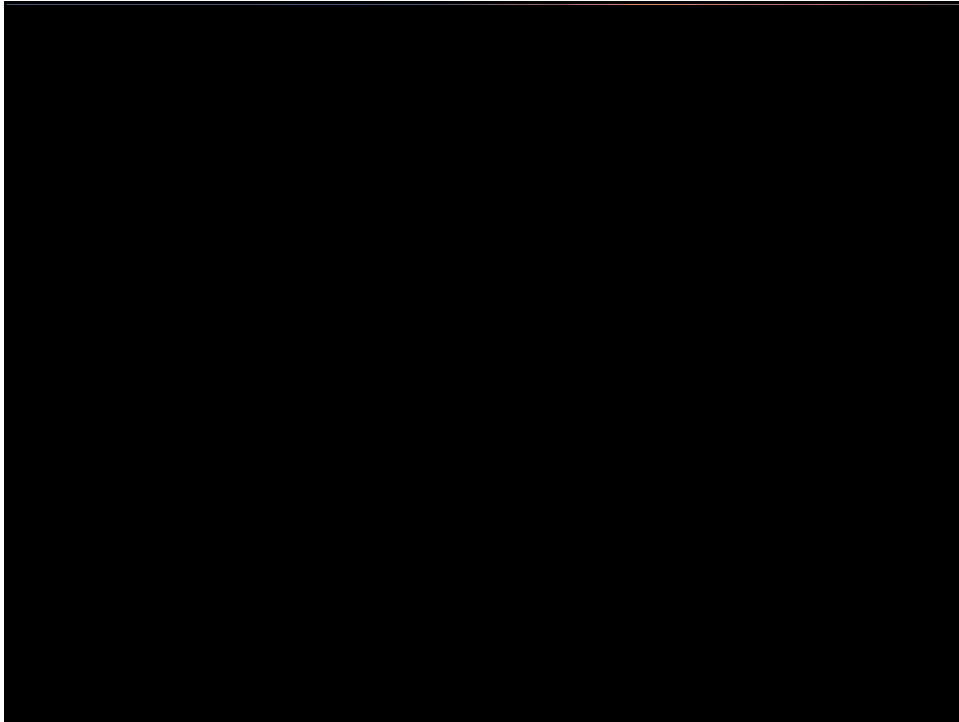
Magn: 1.0x
35 Deg
35 MHz
DR: S - J-Hashemian Clin

Gain: 85 dB
TV: 0.48
Lens: 125 V
Wave: 31 dB
S-Gain: 82 dB

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Post operative complications

- Anterior subcapsular cataract
- High IOP
- Halos and glare
- Pupillary block
- Endothelial cell loss
- Uveities
- Retinal detachment
- Endophthalmitis


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Special indications

- **Keratoconus**
- **Post-corneal Transplant**
- **Correction of Residual Refraction in Pseudophakia**
- **Presbyopia Implantable Phakic Contact Lens (IPCL)**
- **Role in pediatric age group**



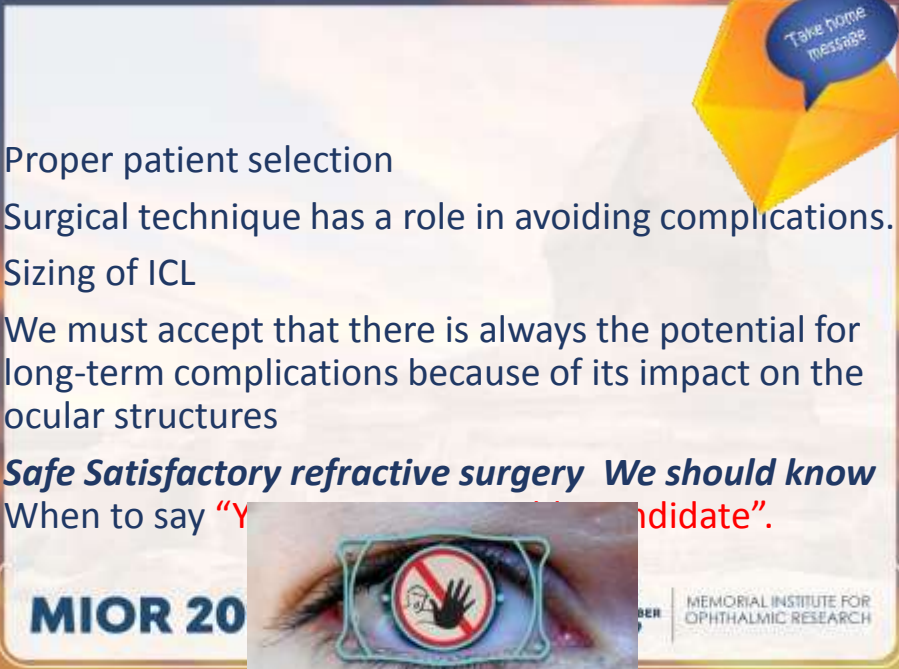
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Dream LENS

- Easy to insert , remove , exchange
- Small wound
- Thin profile well fixated no pressure or damage
- Biocompatible material
- Large optical zone
- No need for especial equipments in operative room




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Take home message

- Proper patient selection
- Surgical technique has a role in avoiding complications.
- Sizing of ICL
- We must accept that there is always the potential for long-term complications because of its impact on the ocular structures
- ***Safe Satisfactory refractive surgery We should know***
When to say “**Y**ou are not a candidate”.

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Thank You



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