

Challenging Cases in Presbyopic IOL Surgery

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Bridging between Intraocular and Corneal Surgery

Patient Expectations

What they say is "I want to be able to read"

What they want is Accommodation

High Hyperope

Pt: CS DOB: 12/2/34

MR: OD: +7.50 – 2.50 x 174 20/25

OS: +7.25 – 0.50 x 11 20/25-

OD: G2 NS, G2 cortical changes

OS: G2 NS, G2 cortical changes

Discussed different types of IOL's, patient wants to be eyeglass free as much as possible

Surgery 1/2/07 OD and 1/16/07 OS

OD: Crystalens AT 5.0 25.5

OS: Crystalens AT 5.0 27.5

No complications and initial healing normal

3 Month Follow up

- 4/6/07 No irritation, vision blurred especially right eye.

- MR: OD: +1.50 – 3.50 x 175 20/25, J3@16"

OS: pl – 1.50 x 175 20/25, J3@16"

Slit Lamp: well healed, IOL's centered and clear

Tx: LASIK enhancement to clear vision

LASIK Enhancement

LASIK 4/12/07

No complications healing goes as planned

7/14/07, 3 months post LASIK

MR: OD: -0.50 – 0.25 x 125, 20/20-, J2@ 16"

OS: +0.50 DS, 20/25+, J2@ 16"

Results

Pt very happy, vision 20/20- uncorrected distance and J2 uncorrected at near. No need for glasses except with long term reading under dim illumination.

Has referred 7 friends to us

Mix and Match

- Decreased vision, especially in bright light. Right eye worse.
- MR: OD: -0.75 – 1.00 x 115, 20/20-

OS: -0.75 – 0.50 x 80, 20/20-

OD: G2+ NS

OS: G1+ NS

Pt wants IOL due to decreased VA especially while performing surgery

IOL Choice

Pt chooses SV IOL for first eye for best distance acuity:

7/1/05 implant Technis 17.5

No complications, surgery goes as planned.

3 month follow up:

20/20+ uncorrected

MR: OD: +0.25 - -0.50 x 110, 20/15-

What to do with other eye

Pt is ophthalmologist, decides he wants a multifocal for second eye.

Implant ReStor OS: 12/7/05, 15.5D

No complications, healing goes well

20 Happy?

Pt uncorrected VA OS: 20/20-, J2 @ 13" no overrefraction.

Over next 18 months pt complains of glare and halos in OS

Decides to have lens exchange

Monovision

Pt very happy with crispness of Technis, decides to have modified monovision in OS

Lens exchange, 5/28/08, Technis 18.0

Goal -1.00

Uncomplicated surgery, heals well

Results

Uncorrected VA: OD: 20/20+, J8

OS: 20/50, J5

MR: OD: +0.25 - 0.50 x 110, 20/15

OS: -1.25DS, 20/20+

Pt very happy with acuity, no glare or halos, no problem in performing surgery or other life functions.

She Wants Refractive Sx

Wants Refractive Sx, tired of contacts, friends have had LASIK.

MR: OD: -9.00 – 0.75 x 35, 20/25

OS: -8.75 – 1.25 x 35, 20/25

Pt told LASIK too risky with amount of myopia, decides to do PRK

PRK

1/16/04 PRK performed on OD

6/16/05, 20/40 uncorrected, MR: -1.00

Enhancement

1/10/06, pt wants enhancement, PRK performed

Healing goes much smoother than first SX

8/23/06, OD VA 20/20, MR: +0.25-0.50 x 175 20/20

Ready for second eye, RLI chosen Staar Visian -8.50 implanted, uncomplicated Sx, healing goes smoothly

Complications

1/17/07, 4 month post op RLI

Pt complains of blur OS, VA 20/30-

MR: OD: PI - 0.75 x 15 20/20

OS: +1.00 - 1.25 x 20, 20/30-

Enough is Enough

Schedule lens exchange: 9/26/07, removed Visian implant Crystalens, AT5.0, 11.5, goal is -1.00

11/10/08, 6 week visit, pt happy with vision sees well near and far

Uncorrected VA: OD: 20/20, J8

OS: 20/100, J1

MR: OD: PI - 0.50 x 05, 20/20, J8

OS: -2.00 - 0.75 x 175, 20/20, J4

Pt offered LASIK enhancement OS, happy with current VA no more Sx

No More Glasses

Wants to be spectacle free

MR: OD: +2.25 - 1.00 x 165, 20/20

OS: +0.75 – 0.50 x 75, 20/20

Choices

What are this patients choices:

LASIK/PRK for distance with readers

LASIK/PRK monovision

Multifocal LASIK/PRK

RLE/multifocal

RLE/accommodative

Stay in glasses/contacts

RLE

Implant: OD: Crystalens AT 5.0, 20.0, 1/9/08

OS: Crystalens AT 5.0, 20.5, 1/16/08

Trouble at Near

2 months out, patient has excellent distance VA but complains of poor near.

MR: OD: PI – 0.50 x 175, 20/20-, J5

OS: PI – 0.25 x 98, 20/20, J5

Importance of YAG

Perform YAG OU, 3/15/08

Follow up 1 month later

Still problems with near, happy with distance

MR: OD: +1.00-1.00 x 150 20/20, J5

OS: +0.25 – 0.75 x 97, 20/20, J5

Results

PML : 1/14/09 OS

3/12/09: Pt happy with results

MR: OD: +1.00 – 1.00 x 150, 20/20, J5

OS: PI – 0.25 x 90, 20/20, J1

RK

Pt: RM, WM, DOB: 5/18/49

Pt had RK in 1986, no problems until 2003

Pt complains of halos, ghosting and glare. Wants LASIK or surgical enhancement

Rx not high enough and too much irregularity for more surgery

CL Fit

Fit with RGP 10/14/04, correctable to 20/25 but not happy with comfort.

Refit with Synergeyes, 11/20/04 correctable to 20/30+. Comfort adequate.

Successful with Synergeyes until 6/06

Cataract

MR: OD: -0.50 – 0.75 x 135, 20/50

OS: -0.25 – 0.25 x 30, 20/100

IOL Choice

Monofocal

Aspheric

Multifocal

Accommodative

Implant Crystalens

20 Happy

Surgery goes very well healing normally

VA uncorrected 20/25 OU, J2 @ near

MR: OD: -0.50-1.00 x 135, 20/20-, J2

OS: -0.75 – 0.75 x 55, 20/20-, J2

How Many Surgeries Do You Want

72 y/o white female

Hx of EOM surgery when 3 y/o

Glasses since 3 y/o

No Hx of diplopia with CLs

Medical History of Breast Cancer

Quilter and uses computer of genealogy

History

Manifest OD +4.75-3.00x005 20/40

 OS +5.25-3.50x177 20/50

Treatment Options

Single Vision IOL- Continue with glasses far and near

Toric IOL – Continue with glasses for near

Multi-focal IOL – Glasses for intermediate

Accommodating IOL with LVC- Glasses rarely for reading

Staged Biotic Procedure

1st Procedure – Bilateral Intralase Flaps

2nd Procedure – CE with Crystalens OS – target -0.50

3rd Procedure – CE with Crystalens OD – target plano

4th Procedure – LASIK OU for residual cylinder and fine tune sphere

Outcomes

OD +0.25-2.75x177 20/20

OS -0.75 – 2.50x005 20/20

Allegretto Treatment

UCVA OD 20/20- OS 20/20 J3+ OU

“Why don’t my contacts work anymore”

67 y/o female

Successful Acuvue bifocal CL wearer

Wore monovision prior to bifocal

No medical history, No family history

Trends toward “easy going” on Dell Survey

Current complaint – Contacts not comfortable

No vision complaints

Manifest	OD -3.00 sphere	20/40
	OS -5.50-1.00x105	20/30-

Treatment

Discontinue CLs

Hot compress BID

AT qid

RTO 2 weeks

Lens Options

Single Vision IOL – Loses near vision from CL’s

Monovision IOL- Greater “disparity” than when successful with mono

Multifocal IOL – Similar to current CLs

Accommodative IOL – Need glasses for near

Treatment

ReStor 3.0 IOL OU

UCVA OD 20/25 OS 20/25 J2OU

Manifest OD plano -0.25x180 20/25+

OS plano -0.25x100 20/25+

Pt very happy with vision

Binocular Defocus Curve

When Do You Want it Clear

58 y/o male

Management Consultant

S/P RK 1993

Very successful until 2003

“Decrease VA in morning, seems better at night”

Glare with driving

History

UCVA OD 20/50 OS 20/50

Manifest OD plano-0.75x90 20/40

OS +1.00-0.50x85 20/40

RTO in AM for refraction

UCVA OD 20/100 OS 20/40

Manifest OD -1.00-0.75x88 20/40

OS plano-0.50x85 20/40

Treatment Options

Single Vision IOL (target AM) – need distance Rx evening near Rx all the time

Single Vision IOL (target PM) – need distance Rx morning need near Rx evening some morning

Crystalens IOL (target AM)- Good Va far and intermediate morning Need reading Rx evening

Crystalens IOL (target PM) - Need reading Rx in morning Good Va far and intermediate in evening

Treatment

Pt selected AM refraction

Targeted -0.50 in OS

AM UCVA	OD 20/20-	OS 20/25
		J4 OU at near
Manifest	OD	-0.25 sphere 20/20
	OS	-0.50 sphere 20/20

Wears readers most evenings and sometimes at work