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Cataract Surgery Comanagement for Opticians: Optical Solutions to Suboptimal Outcomes

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VISION EXPO EAST 2022
NEW YORK, NEW YORK

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thank you for being with us this year.**

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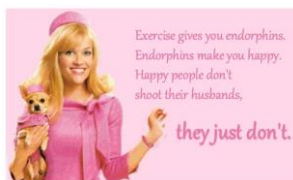
Shana Barrett Zeitlin, O.D. has no financial interests to disclose.
Vincent Young, M.D. has no financial interests to disclose.

Communication: Between the ophthalmologist and optician

- ▶ Important that docs and opticians work together
 - ▶ Comanagement
 - ▶ Optometrist and ophthalmologist
- ▶ Developing understanding of expectations and limitations
- ▶ Patient satisfaction is the ultimate goal

Communication: Between the optician and the patient

- ▶ Appeasing the unhappy patient
- ▶ Improving patient-doctor relationship



Cataract-related Vision Deficits – impact on activities of daily living

- ▶ Blurred vision
- ▶ Distance – driving, television, captions
- ▶ Near – reading, using smartphones and other electronic devices
- ▶ Glare
- ▶ Requiring brighter light for indoor activities

Glare



- ▶ Earliest complaints of younger cataract px
- ▶ Glare with driving, particularly at night and in the rain
- ▶ Glare testing
 - ▶ Insurance company typically wants a comment about the setting in which glare testing has been provided (low light, bright light, ambient light) and brightness of light used to test
- ▶ Have px read chart with optimal correction. Then shine light into eye.
 - ▶ Px without glare from cataract can still read it
 - ▶ Px with cataract will drop vision by a few lines-- most insurance companies will cover surgery if glare drops VA to less than 20/50
- ▶ Only necessary in px who are 20/40 or better for insurance purposes

How do patients with cataracts see?

- ▶ Having all lights on in the house
- ▶ "Wine colored tablecloth"



Pre-operative Profiles of Cataract Patients

- ▶ Discuss specific needs
- ▶ Profile varies per patient--need to vary your approach
- ▶ Healthy (no ocular comorbidities)
- ▶ Dry eye syndrome
 - ▶ Treat prior to cataract surgery for better postoperative outcome
- ▶ Previous corneal refractive surgery
 - ▶ RK
 - ▶ LASIK



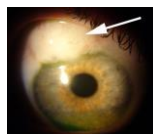
A note about IOL implant calculations...

- ▶ Lens implant calculations are based on formulas that have changed over the years, but are a combination of corneal curvature and axial length
- ▶ All formulas go out the window once px has had refractive surgery!
- ▶ Be prepared that outcomes may be different
 - ▶ Counsel patient about this prior to surgery
- ▶ Nomograms for patients who have had refractive surgery don't have enough "n" to be as accurate as possible
 - ▶ In the coming years will likely get more accurate as more of the population ages



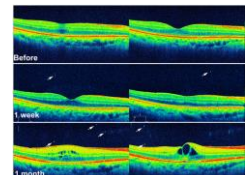
Pre-operative Profiles of Cataract Patients

- ▶ Glaucoma
 - ▶ May have combined MIGS procedure
 - ▶ Astigmatism effects s/p trabeculectomy
- ▶ Corneal topography prior to sx
 - ▶ Mild forme fruste keratoconus
 - ▶ Irregular astigmatism



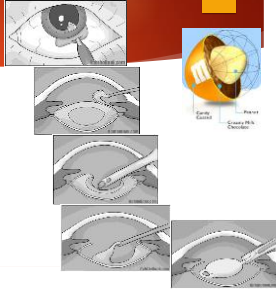
Pre-operative Profiles of Cataract Patients

- ▶ Inflammatory disease
 - ▶ Possible predilection for macular edema
 - ▶ PG use (glaucoma)
- ▶ Diabetic retinopathy
- ▶ Macular degeneration
- ▶ Suggest macular OCT prior to cataract surgery
 - ▶ Pick up issues that may be present before surgery
 - ▶ Be prepared!

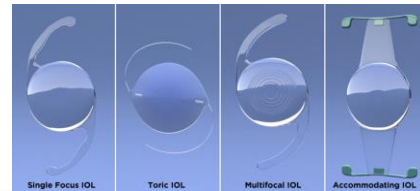


Cataract surgery overview

- ▶ Incision close to limbus
- ▶ Viscoelastic for inner surface protection (mostly endothelium to preserve corneal clarity)
- ▶ "M&M"
- ▶ Vitreous gel must not be breached—movement of vitreous can cause traction/RT/RD
 - ▶ Can contribute to CME



Types of IOL implants



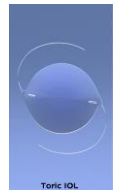
Monofocal IOL

- ▶ Optimal contrast sensitivity
- ▶ No associated photic phenomena such as halos
- ▶ Patient needs to understand the likely need for near correction postop
- ▶ Monovision as an option
 - ▶ Provide range of clarity
 - ▶ Depth perception issues
- ▶ No additional cost above insurance coverage



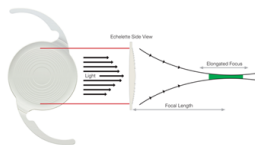
Toric IOL

- ▶ Correction for moderate to large amounts of astigmatism
- ▶ Surgeon marks implant location and positions implant to correct the patient's refractive error
- ▶ Misalignment will cause distortion
- ▶ Considered a premium lens upgrade, but less expensive than multifocal IOLs



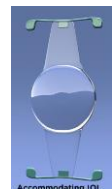
Extended Depth of Focus

- ▶ 50% of implanted premium IOL's
- ▶ Developed to improve intermediate vision without compromising distance vision
- ▶ Better for intermediate than multifocals, but multifocals are better than EDOF for near
- ▶ Contrast sensitivity comparable to monofocal IOL's
 - ▶ Vague perception of increased clarity
 - ▶ High index lenses and Abbe-- aberrations
- ▶ Additional fee to patient



Accommodative IOL

- ▶ Designed with some flexibility of movement
- ▶ Mimic motion of the natural lens with contraction of ciliary muscle
 - ▶ IOL optic moves slightly forward
- ▶ Expanded range of clear vision compared with monofocal IOLs
- ▶ Less effective than multifocal IOLs at near



Multifocal IOL: Outcomes

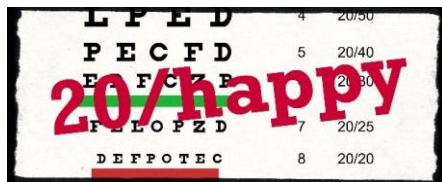
- ▶ Theoretically improved vision at all distances
- ▶ 89% of patients obtain useful distance and near vision
- ▶ Satisfied requirements for driving and reading a newspaper
- ▶ Yet, there is still a high rate of spectacle dependence
- ▶ High levels of patient satisfaction – IF you pick the right patient!
- ▶ Decreased contrast sensitivity – may impact ability to perform tests used to diagnose glaucoma (visual field)
- ▶ May cause artifacts in OCT images



Multifocal IOL: Expectations

- ▶ There are no pre-op factors in any study – age, gender, biometry data, VA, refraction, questionnaire results that were significant for estimating overall satisfaction
- ▶ Therefore, the indication for multifocal IOL cannot be determined on the basis of pre-op evidence
- ▶ Patient education and careful patient selection is paramount
- ▶ Manage patient expectations before surgery

We care more about practical outcomes!



A word about myopes...

- ▶ Counseling re: refractive goal and lens implant choice is HUGE for myopes
 - ▶ Especially mild-moderate myopes, under 4D
- ▶ If fully corrected for distance, they will lose the ability to see up close without glasses
- ▶ They've had this ability their whole lives!
- ▶ Dependence on readers can be devastating if it's unexpected
- ▶ Progressives for full time wear may be a solution
 - ▶ Emphasize the benefits of better distance vision

MFIOL Residual Post-op Vision Complaints

- ▶ Inadequate distance correction- Only 68% of patients are spectacle free
- ▶ Inadequate near correction – 20% of patients are dissatisfied or very dissatisfied
- ▶ Same degree of dissatisfaction in patients with EDOF lenses and bifocal IOL's with additional powers of 3D and higher for near
- ▶ Post-op near vision was less important determinant of overall satisfaction even though it was the reason for the multifocal lens in the first place!
- ▶ Inadequate intermediate vision
- ▶ Photic phenomena – glare, halos, waxy vision, starbursts
- ▶ Dysphotopsia
- ▶ Anisometropia in the immediate postop periods
- ▶ Long-term anisometropia?

Multifocal IOLs: Outcomes

- ▶ Caution in patients with concurrent eye disease
- ▶ Dry eye syndrome is present in 15% of patients dissatisfied with multifocal IOL
- ▶ Multifocals will not cause more DES, the px will just notice it more because of their expectations of perfect vision without glasses!
 - ▶ More likely to be higher maintenance patients
- ▶ Additional fee to patient
- ▶ Patient dissatisfaction sometimes results in IOL exchange
 - ▶ Safety of exchange is lower than primary cataract surgery

IOL exchange?

- ▶ Safety of lens exchange
- ▶ If early in process– no scarring– less risky to do lens exchange
- ▶ After 6-9 months, more risk
 - ▶ Pulling on capsule once scarred down
 - ▶ Can breach posterior chamber
 - ▶ Retinal complications

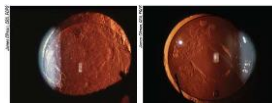


Unexpected refractive results: immediate

- ▶ IOL displacement forward results in more myopia than expected
 - ▶ If goal was OU distance acuity, may result in monovision
 - ▶ Fibrosis and contracture of bag around haptic (vaulting of optic)
 - ▶ Retained viscoelastic
- ▶ If no disease present (correctable to 20/20), then a refractive solution is needed

Unexpected refractive results: delayed

- ▶ Scarring – 3-6 months to take place
- ▶ May have refractive change after post-op period
- ▶ PCO (posterior capsular opacification)
 - ▶ General sense of blur
 - ▶ More astigmatism on autorefracton
 - ▶ No major improvement with careful refraction



Optical Management

- ▶ Patient has made efforts to improve vision, and has gone so far as to have surgery
 - ▶ Tap into this mindset to get patients to see their very best
- ▶ Reading glasses- OTC vs. prescription
 - ▶ Poor optical quality, PD (induced prism), astigmatism
 - ▶ Realize that this person entered into this whole course of action with goal of optimal vision
 - ▶ "Get one good pair"- often patients will notice the quality difference

Optical management

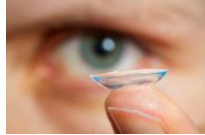
- ▶ Intermediate glasses
 - ▶ May be useful for MF IOL with computer use
- ▶ DVO – Driving glasses
 - ▶ Post-monovision implants
 - ▶ Low astigmatism, low myopia
- ▶ PAL vs. bifocal
 - ▶ Expense vs. practicality
 - ▶ Often, patients who had a PAL don't realize how much they depend on the intermediate portion
 - ▶ "I'm retired now"

Lens coatings and options

- ▶ The world is brighter post cataract surgery!
 - ▶ Patients may be less tolerant of excess light
- ▶ Sunglasses
 - ▶ Photochromic lenses
 - ▶ Conventional
 - ▶ Extra-active
 - ▶ Darkness while driving
- ▶ Light tint (5-8% glare/photosensitivity)
- ▶ Photo pigment depletion-- night vision
- ▶ AR coating
 - ▶ Especially with high index
- ▶ Blue light filters

Contact lenses are a viable option

- ▶ Cataract surgery does NOT preclude the patient from wearing contact lenses!
- ▶ Ability to trial different refractive corrections without glasses remakes
- ▶ Multifocal CL after monofocal IOL
- ▶ Dry eye?
 - ▶ Ideally, treated before cataract surgery
 - ▶ Newer lens materials
 - ▶ Daily disposable options are increasing
 - ▶ Punctal plugs?



YOU are a vital part of the cataract surgery process!

- ▶ Too often we diminish the role of glasses correction when really it's exactly what the patient needs
- ▶ Not just about value of selling/making more money
- ▶ Opticianry is about helping person live their lives well after medicine and surgery have done all that they can do
- ▶ MUCH easier to have a 20/happy patient when options are explained prior to surgery

THANK YOU!

Questions?
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