



The Aftermath: What happens to your patients after their lenses are finalized?

Dr. Andrew Biondo

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WELCOME!



Host: Dr. Ariel Cerenzie

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- For a COPE certificate, please fill out the survey link in the chat. Also, the survey link will appear when the webinar ends.
- CE certificates will be delivered by email and sent to ARBO with OE tracker numbers
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- Ask questions using the zoom on-screen floating panel





Speaker Bio

Dr. Andrew Biondo owns Kirkwood Eye Associates in the St. Louis, a specialty contact lens practice with the objective of delivering an exceptional experience for his patients and community. He also serves as a consultant to the specialty contact lens industry and dry eye industry and speaks internationally on specialty contact lenses and practice management. Dr. Biondo is a fellow of the Scleral Lens Education Society, serves as the Immediate Past President of the St. Louis Optometry Society and enjoys spending time with his wife and two children



Financial Disclosures

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OYSTER POINT PHARMACEUTICALS - HONORARIUM

Thank you! Please join us for our next event



Date: August 6-7, 2022
Time: 8:00 AM - 1:00 PM Pacific Time
Speakers: Mitch Bach, OD, Kent Welsh, MD, John Gelles, OD, Elise Kramer, OD, Steven Greenstein, MD, Melissa Barnett, OD, Barry Eiden, OD, Clark Chang, OD, William Tule, OD and Christine Sindt, OD
Topic: Keratoconus Symposium
COPE: 8 hours virtual CE

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AFTER THE FIT IS FINALIZED...

THE AFTERMATH

THE BEGINNING IS THE MOST IMPORTANT PART OF THE WORK

Plato

PROACTIVE SOLUTIONS

- ▶ Improved compliance
- ▶ Improved patient success and satisfaction
- ▶ Reduces stress
- ▶ Reduced staff time
- ▶ Reduced chair time

- ▶ = Increased profitability



OCULAR HEALTH

CASE REPORT

Microbial Keratitis Secondary to Unintended Poor Compliance With Scleral Gas-Permeable Contact Lenses

Dittrichman, Amin B. O.D., M.S., Marks, Amanda G.B., RLS

Author Information @

Eye & Contact Lens: Science & Clinical Practice January 2016 - Volume 12 - Issue 1 - p 49-54
doi: 10.1097/ECL.0000000000000024

OCULAR HEALTH

Scleral Lens Issues and Complications Related to Handling, Care and Compliance

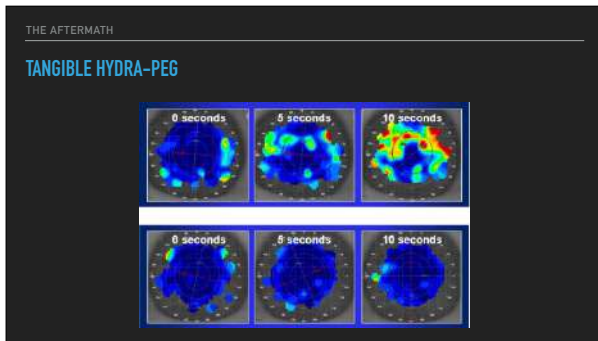
October 2019 - Journal of Contact Lens Research and Science 10(10) 1-13
DOI: 10.1027/14469073.1000000000000024

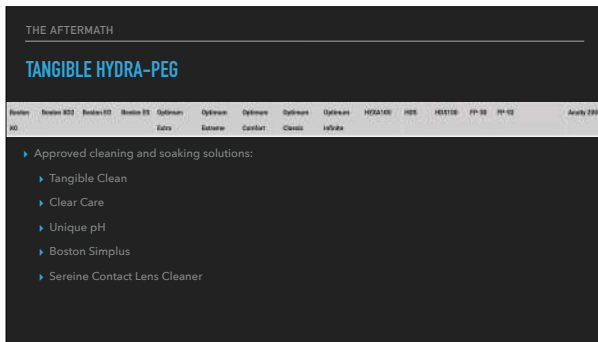
Authors:

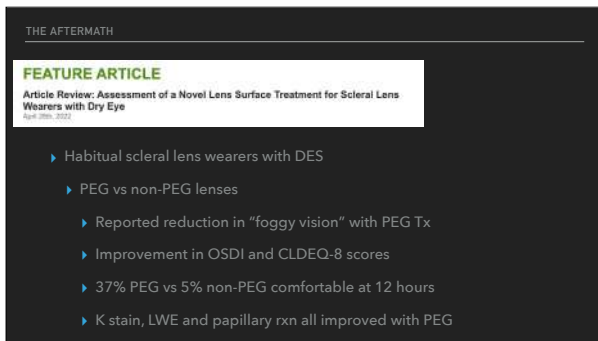


- ▶ MK relatively rare
 - ▶ Healing nature of PTL
 - ▶ Better compliance than standard CL wearer
 - ▶ Predominantly DW
- ▶ Risks:
 - ▶ Compromised corneas
 - ▶ Poor lens hygiene
 - ▶ Immunocompromised
 - ▶ Corticosteroid use
- ▶ AK has been documented
 - ▶ Serum tears









BEFORE YOU FINALIZE

- ▶ Care Systems:
 - ▶ Brand name vs Generic
 - ▶ Multiple bottles or all-in-one
 - ▶ OTC vs Rx
 - ▶ Peroxide vs MPS



BEFORE YOU FINALIZE

- ▶ Care Systems:
 - ▶ Tangible Clean
 - ▶ Low viscosity
 - ▶ Soft or rigid
 - ▶ Familiar system
 - ▶ Most compatible with THP coating



BEFORE YOU FINALIZE

- ▶ Care Systems:
 - ▶ Tangible Boost
 - ▶ monthly "recharge"
 - ▶ Use PREVENTATIVELY
 - ▶ Prescription
 - ▶ Through Tangible Sciences



BEFORE YOU FINALIZE

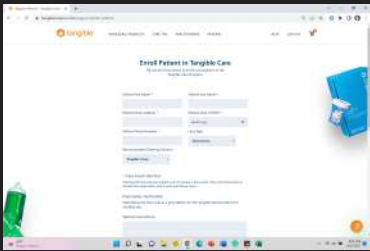


BEFORE YOU FINALIZE

- ▶ Tangible Care Program
 - ▶ Subscription Clean and Boost
 - ▶ Care Coach
 - ▶ Online and phone support
 - ▶ Online education
 - ▶ Discounts



BEFORE YOU FINALIZE



LENS HANDLING

- ▶ I&R #1 reason for scleral lens failure
 - ▶ Some studies say up to 30% drop out*
 - ▶ Training videos on ScleralLens.org
 - ▶ Dedicated staff members
 - ▶ Follow-up calls and visits



*BARNETT M, LIEN Y, LI J, ET AL. USE OF SCLERAL LENSES AND MINUSCLERAL LENSES AFTER PENETRATING KERATOPLASTY. EYE CONTACT LENS 2014;34(10):136-41. DOI: 10.1097/ICL.0000000000000142

WE'RE GETTING CLOSE...

- ▶ Clear warranty periods
 - ▶ When is fit finalized?
 - ▶ Warranty period?
 - ▶ Spare pair?
 - ▶ Loss or breakage?
 - ▶ Changes in Rx or fit



THE AFTERMATH

FITTING AGREEMENT

- ▶ Charge for fitting
 - ▶ One eye or two?
 - ▶ Includes all follow-ups and remakes?
 - ▶ Includes all measurements or some billed to insurance?
- ▶ Fitting period
 - ▶ From first dispense? From when lens is finalized?
- ▶ Refund for services?

THE AFTERMATH

FITTING AGREEMENT

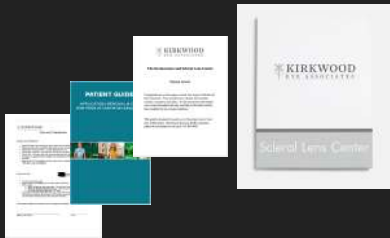
- ▶ Materials Fees
 - ▶ Base lens costs by lab
 - ▶ Coating (included?)
 - ▶ Aberration control
 - ▶ Scan fee
 - ▶ Impression fee
 - ▶ Multifocal or monovision
- ▶ Lens refund policy
- ▶ Loss or breakage
- ▶ Second pair and non-warranted pricing
- ▶ Refitting for changes (KXL, PKP, Hydrops, etc)



THE AFTERMATH

SETTING THEM FREE

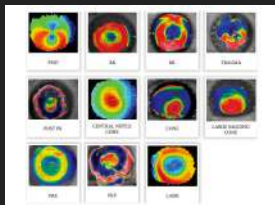
- ▶ Manufacturer info
- ▶ Custom Patient Guide
- ▶ Fit agreement
- ▶ Care
 - ▶ DMV's
 - ▶ Filling solution
 - ▶ Cleaning solution
- ▶ Travel case
- ▶ Mirror



THE AFTERMATH

THE FOLLOW UP

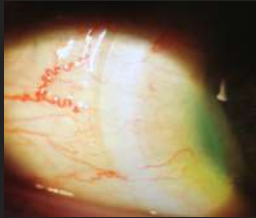
- ▶ Based on Eye Condition
 - ▶ 1 year:
 - ▶ normal K/previous wearer
 - ▶ 6 mo:
 - ▶ Stable Ectasia
 - ▶ Stable graft
 - ▶ 4mo (or sooner)
 - ▶ K edema
 - ▶ Glaucoma
 - ▶ Progressive Ectasia
 - ▶ Newly diagnosed ectasia



THE AFTERMATH

TROUBLESHOOTING

- ▶ Comfort issues
 - ▶ On insertion:
 - ▶ Corneal touch
 - ▶ Edge lift
 - ▶ Worsens throughout day:
 - ▶ Tight edge
 - ▶ Excessive vault
 - ▶ Excessive settling (touch)



THE AFTERMATH

TROUBLESHOOTING

- ▶ Blurry Vision
 - ▶ Air bubble
 - ▶ Residual cyl
 - ▶ Flexure
 - ▶ Surface wetting
 - ▶ Tear layer clouding
 - ▶ Corneal edema



Photo: Greg DeNunzio, OD

THE AFTERMATH

TROUBLESHOOTING

- ▶ Flexure
 - ▶ Over .75D excessive
 - ▶ over K's to Dx
 - ▶ Astigmatic Symptoms
 - ▶ Residual Cyl
- ▶ MOVE TO TORIC HAPTIC



THE AFTERMATH

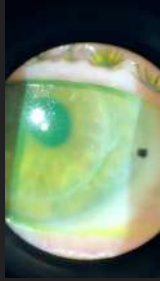
TROUBLESHOOTING

- ▶ Residual astigmatism
 - ▶ Lenticular
 - ▶ Crystalline Lens
 - ▶ Toric IOL
 - ▶ Tilted IOL
 - ▶ Posterior Corneal
 - ▶ High Regular Cyl
- ▶ FLEXURE???



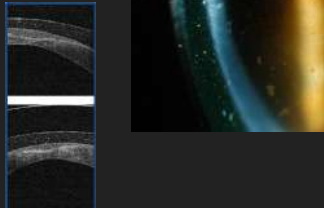
TROUBLESHOOTING

- ▶ Surface wetting
 - ▶ OSD
 - ▶ Poor material compatibility
 - ▶ Poor compliance
- ▶ Solutions:
 - ▶ Change materials
 - ▶ Change care regimen
 - ▶ Rub
 - ▶ Condition lens before insertion
 - ▶ On eye Tx with conditioner
 - ▶ On eye DMV squeegee
- ▶ PROAGENT
- ▶ Hydra-PEG



TROUBLESHOOTING

- ▶ MID-DAY FOGGING



TROUBLESHOOTING

- ▶ MID-DAY FOGGING

- ▶ MDF vs non-MDF
- ▶ Used high mol NaFl under scleral
- ▶ Measured decay with fluorophotometry

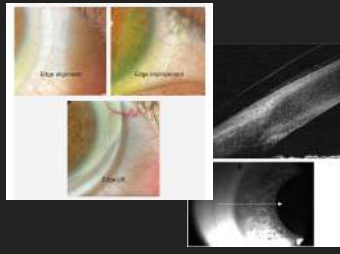
A measure of tear inflow in habitual scleral lens wearers with and without midday fogging

Stolz V, Jallane A, R, Hara K, Walker S, Jain D, Alvarado J, Jan P-O, Bergmeister T, Wilson L, Miller T

- ▶ Conclusion:
 - ▶ No significant difference in tear exchange

TROUBLESHOOTING

- ▶ MID-DAY FOGGING
- ▶ Ddx K edema and surface
- ▶ Lid disease and DES
- ▶ High viscosity filling solutions
 - ▶ celluvisc
- ▶ Optimize fit



TROUBLESHOOTING

- ▶ Corneal Edema
 - ▶ Tight Lens Syndrome
 - ▶ Hypoxia
 - ▶ Excessive central tear layer thickness
 - ▶ Excessive limbal tear thickness
 - ▶ Excessive lens thickness
 - ▶ Inadequate Dk
 - ▶ Dysfunctional endothelium



TROUBLESHOOTING

- ▶ Corneal Edema
 - ▶ CENTRAL CORNEA:
 - ▶ Holden-Mertz min. Dk/t: 24
 - ▶ LIMBUS
 - ▶ Harvitt-Bonanno min Dk/t: 35
- ▶ Known Dk of tear layer: 80
- ▶ Recommendations to reduce hypoxia-related edema:
 - ▶ Scleral central thickness under 250 microns
 - ▶ Central corneal vault under 200 microns
 - ▶ Lens Dk greater than 150
 - ▶ Limbal clearance kept to minimum

Optom Optom Opt, 2012 Dec; 20(12):1067-71. doi: 10.1016/j.opt.2012.07.004. Epub 2012 Aug 8.
Predicting estimates of oxygen transmissibility for scleral lenses.
Wolpoff GJ¹, van der Stoep G, Stroman D, Worth B, Green CP

TROUBLESHOOTING

- ▶ Corneal Edema
 - ▶ 50um to 400um PoLTT = 1.5% edema
 - ▶ roughly 20 to 40 Dk/t
 - ▶ Considered hypoxic at 4%
- ▶ Closed-eye wear still unsafe

Cont. Eye Res, 2018 Nov;43(11):1305-1315. doi: 10.1080/02713683.2018.1500610. Epub 2018 Aug 8.
Central Corneal Edema with Scleral-Lens Wear.
Kim YH^{1,2,3}, Park S⁴, Lee SH^{5,6}, Baek H⁷

TROUBLESHOOTING

- ▶ Corneal Edema
 - ▶ Dk 100, 140, 160
 - ▶ No significant increase in swelling
 - ▶ All under 2%

Cont Lens Contact Dis, 2017 Aug;33(8):372. doi: 10.1177/0891424017701202. Epub 2017 Aug 15.
Effects of scleral-lens oxygen transmissibility on corneal thickness: A pilot study.
DeBorja J¹, Kim YH², Park JH³, Lee H⁴, Zhan X⁵, Lee MS⁶

TROUBLESHOOTING

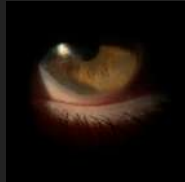
- ▶ Corneal Edema
 - ▶ What can we do?
 - ▶ Control Dk (>100)
 - ▶ Control CT (<400um)
 - ▶ Control reservoir thickness
 - ▶ 200um or less
- ▶ Fenestrations
- ▶ Surgical intervention

Fluid Reservoir Thickness and Corneal Edema during Open-eye Scleral Lens Wear

Elamin Fisher¹, Michael J Collins, Stephen J Vincent

TROUBLESHOOTING

- ▶ CONJUNCTIVAL PROLAPSE



QUESTIONS?