

The Role of Scleral Lenses in Dry Eye

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Specialty Contact Lens & Vision **SOLUTIONS**

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L E F O D P C T
F D P L T C E O
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Disclosures

Bausch & Lomb Specialty Vision Products – Speaker & Consultant



Objectives

Identify dry eye patients in your clinic who would benefit from scleral lenses

Be able to educate patients at all stages of the process

Learn tips and tricks for each specific type of dry eye

Guide your fits to achieve to the best results

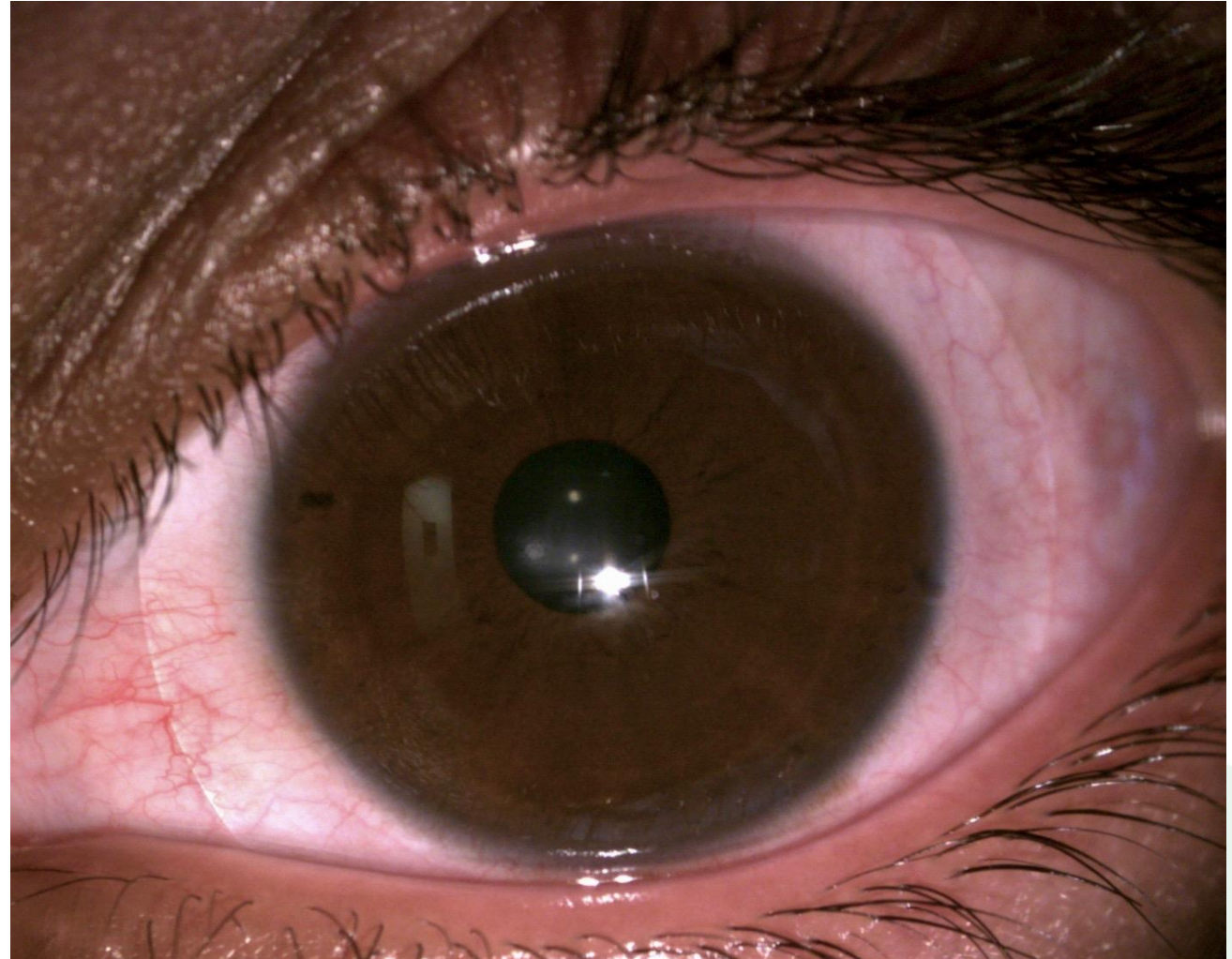


Introduction



How Do Scleral Lenses Help Dryness?

- Protective Shell
 - Avoids lid insult
 - Avoids exposure to elements
- Prevents Evaporation
- Liquid Reservoir
- Adjunct Management of Non-Healing PEDs



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Types of Dry Eye Patients

**SCLERAL LENSES AS
FIRST-LINE
MANAGEMENT?**

Aqueous-Deficient Dry Eye

- Sjogren's Syndrome
- Inflammatory Dry Eye
- Autoimmune disorders



Types of Dry Eye Patients

**SCLERAL LENSES AS
FIRST-LINE
MANAGEMENT?**

Evaporative

- ❑ Meibomian Gland Dysfunction
- ❑ Graft-Versus-Host
- ❑ Ocular Cicatricial Pemphigoid
- ❑ Stevens Johnson Syndrome
- ❑ Symblepharon



Types of Dry Eye Patients



Neurotrophic Keratitis

- Non-healing persistent epithelial defects (PEDs)
 - PROSE: 24-hour wear w/ daily replacement w/ PF saline + fluoroquinolone¹
 - Vigamox (Alcon)
- Non-healing Ulcers
- Safe & Effective²

**SCLERAL LENSES AS
FIRST-LINE
MANAGEMENT?**



Types of Dry Eye Patients

**SCLERAL LENSES AS
FIRST-LINE
MANAGEMENT?**

Neuropathic keratitis

- Post-LASIK
- Chronic Dry Eye
- Dysfunction of nervous system occurring in the cornea
- Subjective improvement No change in corneal nerve density w/ scleral lens wear³



Types of Dry Eye Patients

**SCLERAL LENSES AS
FIRST-LINE
MANAGEMENT?**

Exposure

- ❑ Seventh Cranial Nerve Palsy / Damage
- ❑ Lagophthalmos
- ❑ Surgical Complications

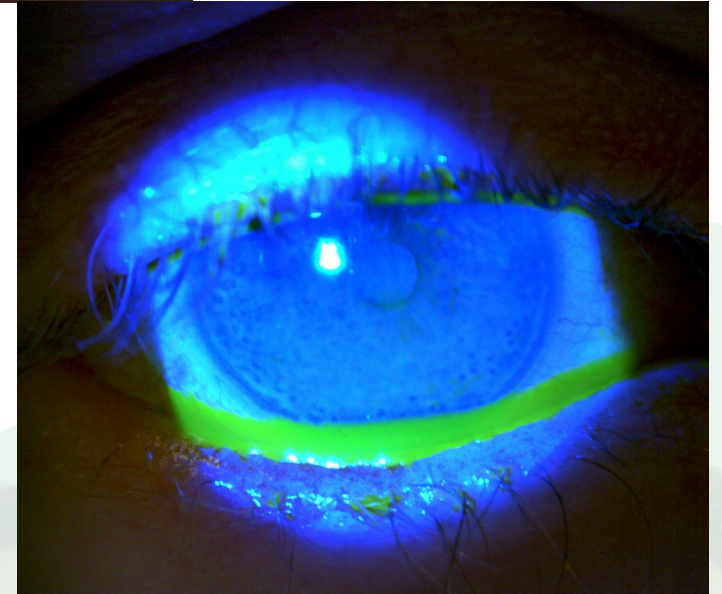
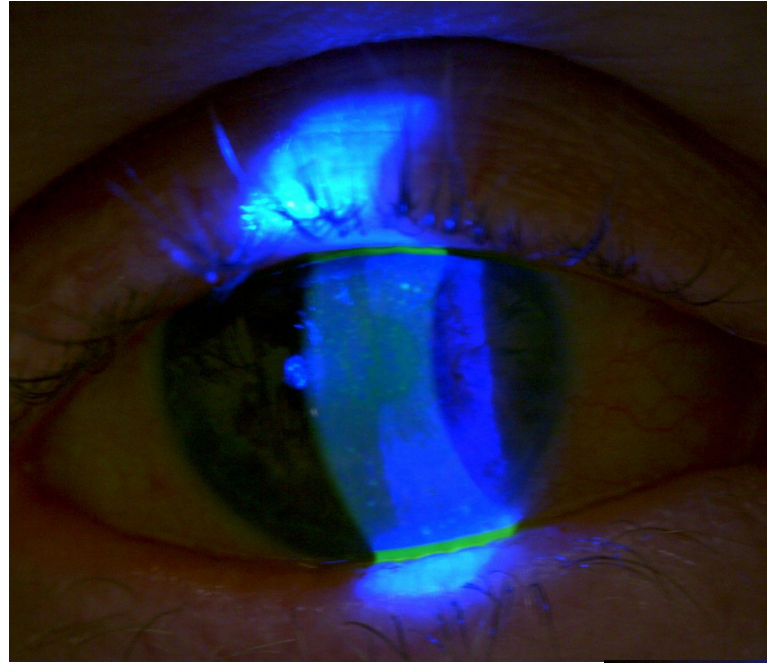
Tarsorrhaphy / gold eyelid weights versus scleral lens wear



Patient Case

**Combination of
evaporative and aqueous
deficient dry eye**

Graft-versus-Host Disease
after acute myeloid
leukemia with bone
marrow transplant



Patient Case

41 y.o. female s/p LASIK (2019)

- 📌 CC: Dryness, discomfort, pain
- 📌 Serum tears 40%, Cymbalta 20mg, Xiidra BID, Systane ung qHS, Systane gtts PF q30 min, Lotemax BID
- 📌 TBUT 3 seconds, MGD Grade 3

Scan-Designed Scleral Lenses

- 📌 Lens awareness
- 📌 Results – 70% improvement, d/c Xiidra, Serum, Lotemax



Patient Case

Exposure Keratopathy

📌 MOHs surgery



Bandage Lens Usage

Scleral vs Soft



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What Dry Eye Patients Can Benefit From Scleral Lens?

All Patients!

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Should You Put Medication Treatment Into Bowl of Lens?

- Jury's Still Out
- Case by Case



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Can You Put Dry Eye Treatment Into Bowl of Lens?

- Preservative-free artificial tears
- Serum tears



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My Recommendations for Scleral Designs For Patients with Dry Eye

- Thinner
- Tighter edges
 - Fluorescein evaluation
- Too tight but no blanching?
 - Symptoms to look for
- Reduce clearance



My Recommendations for Patient Expectations

- Dry eye patients will feel dry (sometimes drier) at first
 - AT insertion
- Fogging
- Sensitivity
 - Edge profile
- Discussion w/ patient on dispensing





**Drop Use
WITH Scleral
Lenses**

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Drop use WITHOUT Scleral Lenses



Many patients can dramatically decrease artificial tear usage



Benefit of
decreasing costly
treatments

Lipiflow
Serum Tears
Amniotic
membranes



EBMD?

Still treat at night

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For Best Patient Outcomes



Start treatment at least
2 weeks to 1 month
before receiving lenses



Consistency is KEY



Dry eye regimen
handout + document!

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Does Filling Solution Matter?

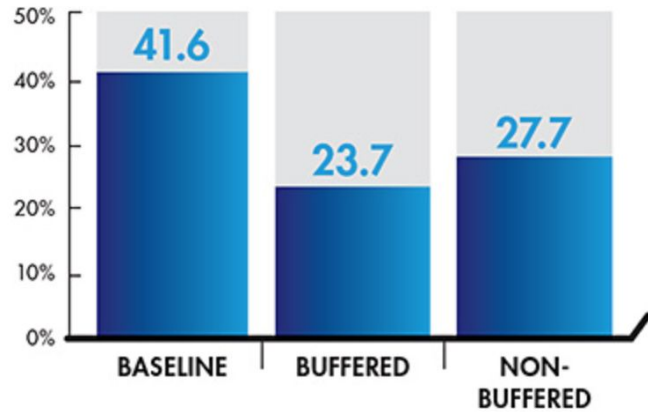


Figure 1. The mean DEQ score prior to scleral lens wear and following two weeks of buffered versus non-buffered saline solution.



Dry eye improved regardless of solution.⁴
Patients preferred 4/5 times, buffered solution

For Best Patient Outcomes

Mean pH of tears: 7.0 ⁵

TABLE 1 pH OF COMMON SCLERAL FILLING SOLUTIONS

SOLUTION	pH
Addipak	5.3
Modudose	5.6
Lacripure	6.5
ScleralFil	7.3
Purilens	7.4

For Best Patient Outcomes

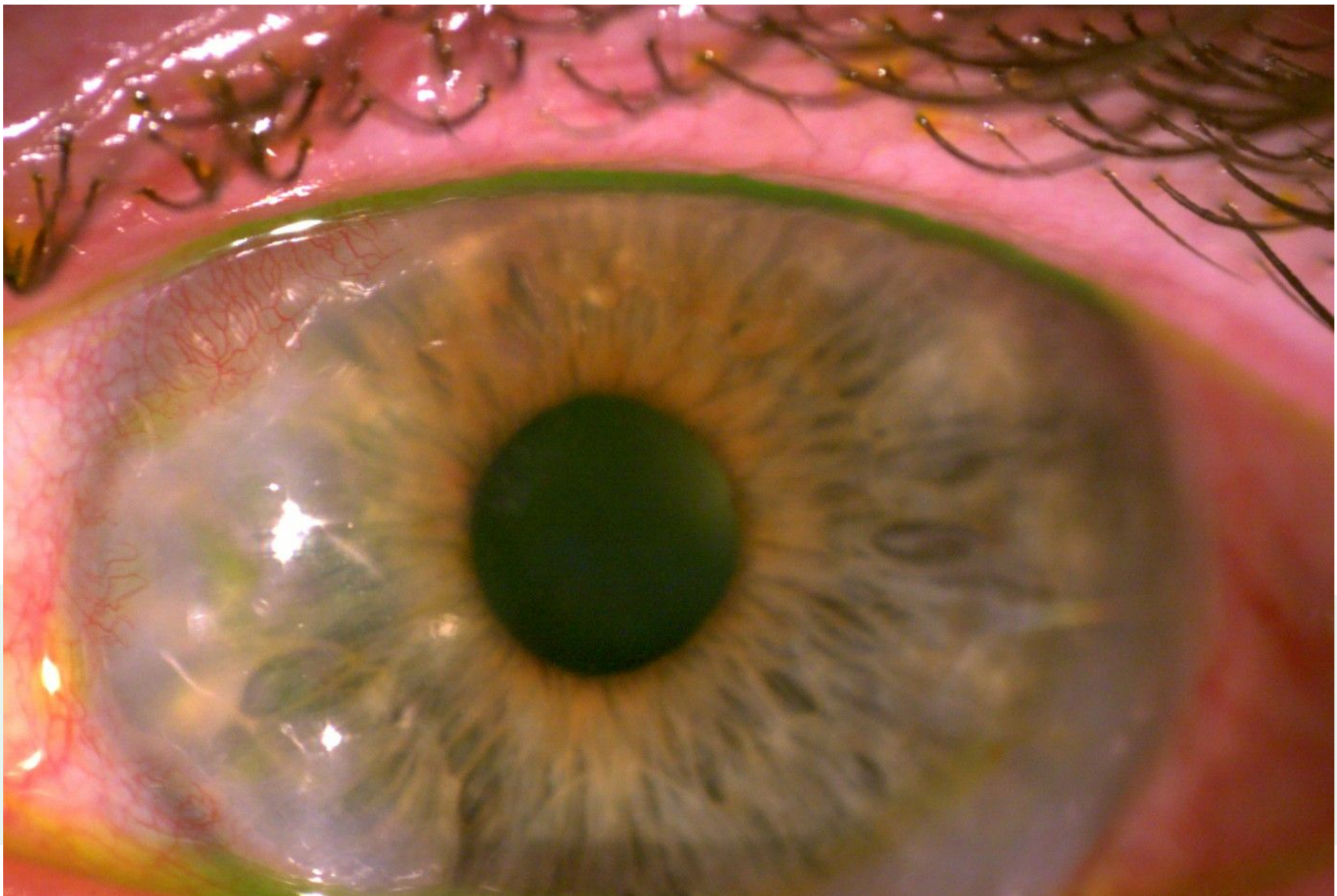
- Exact Drop Usage – Pt Communication
- Handouts
- Re-iteration of instructions on an email sent out after patient leaves dispensing
- Links to where to purchase drops, masks, etc
- Online store



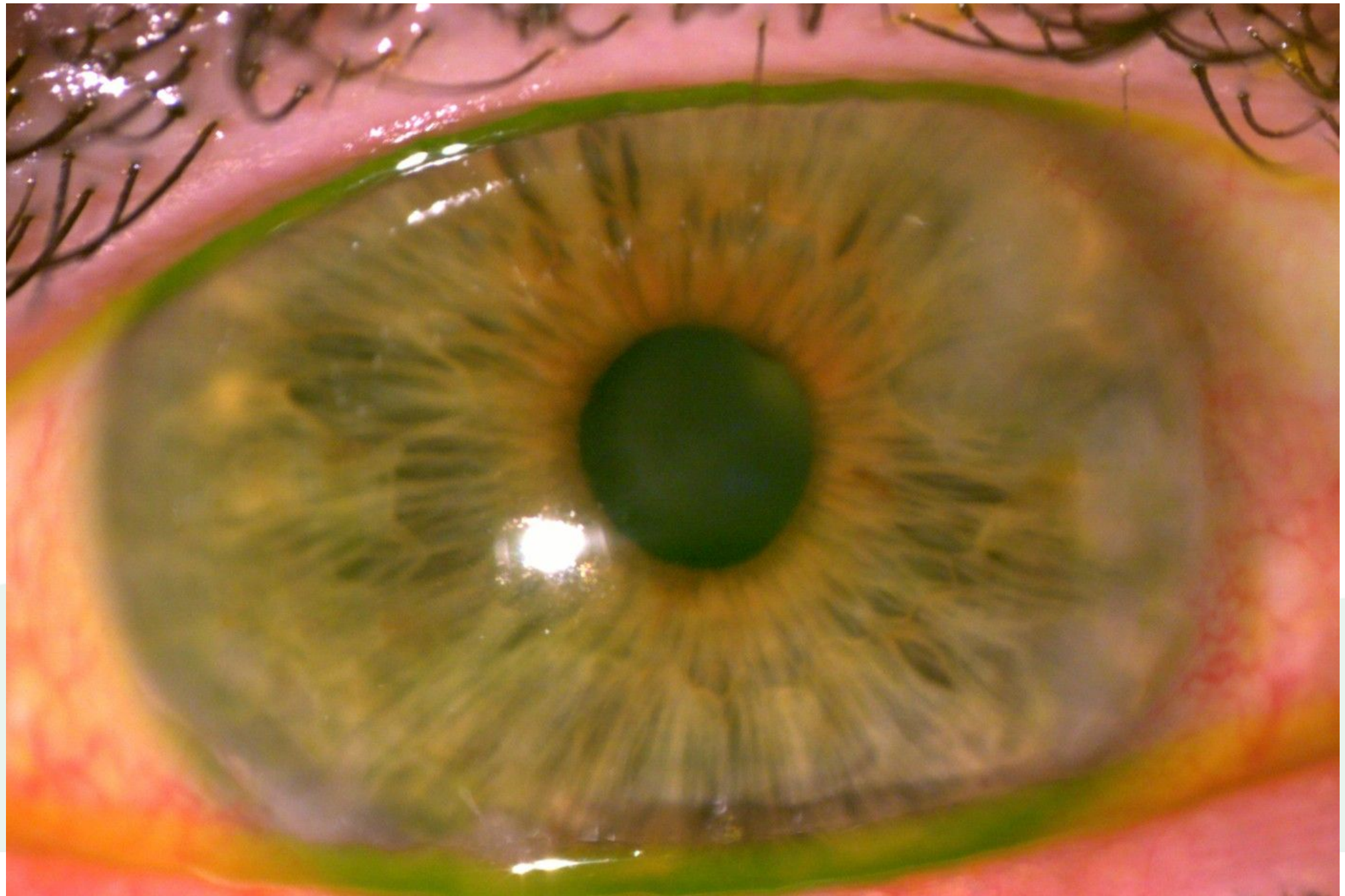
Case Report #1

- 62 y.o male c/o longstanding dry eye
 - Crohn's Disease
 - Long history, now just uses Refresh PF QID OU and Alaway BID OU
 - Decreased sensitivity in the eyes
 - Redness end of day



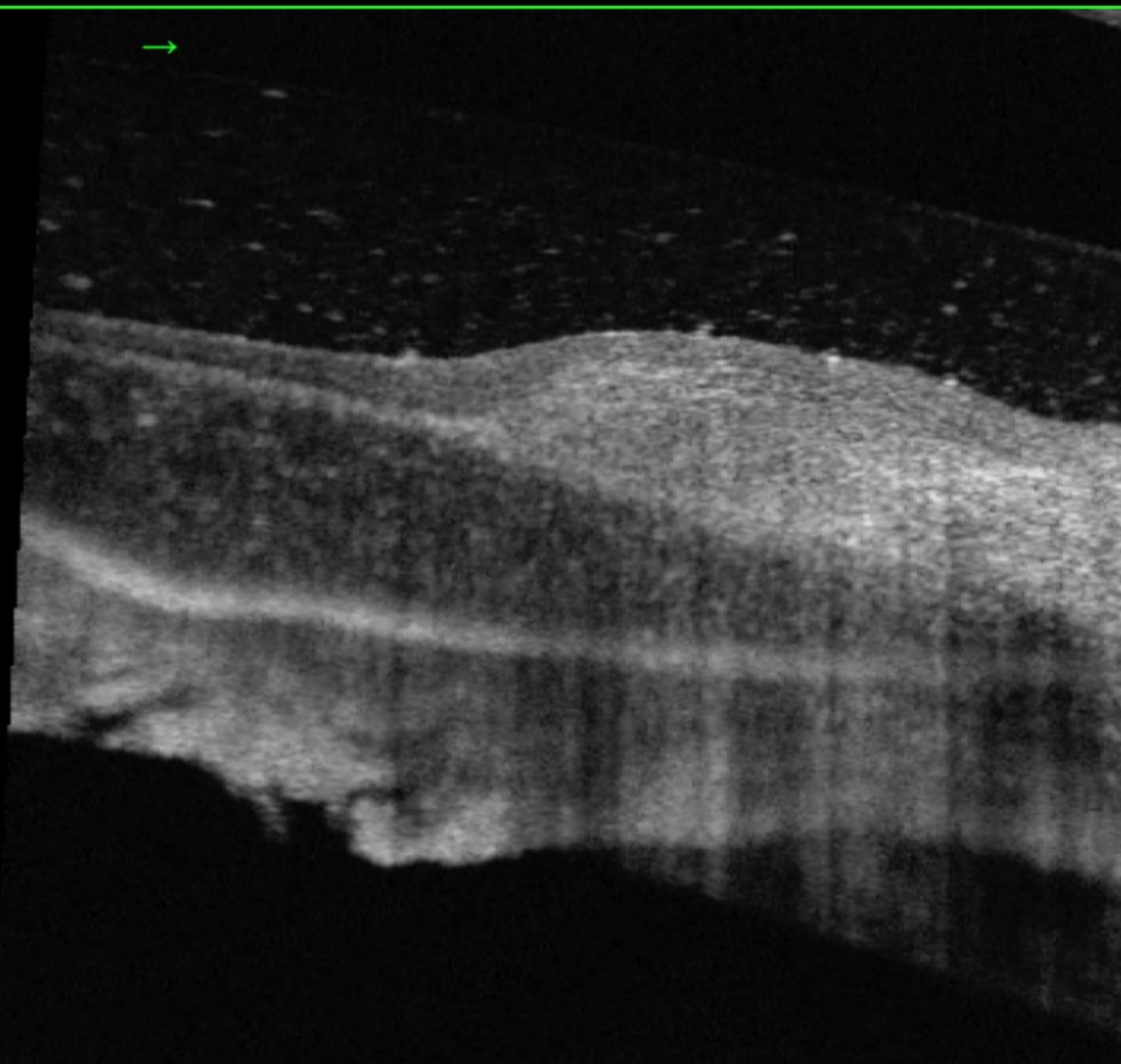
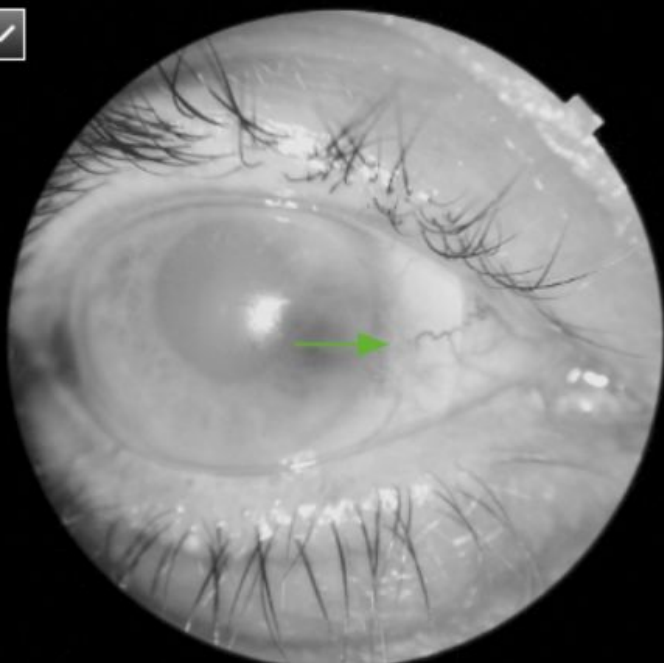
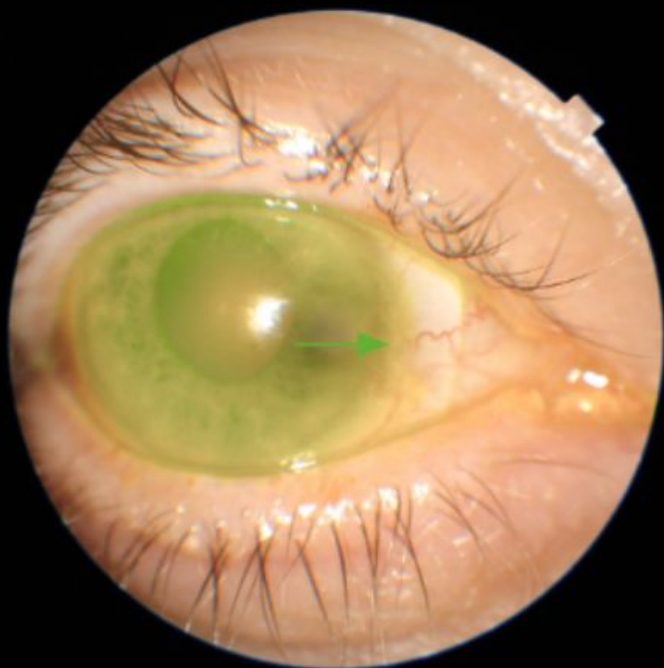


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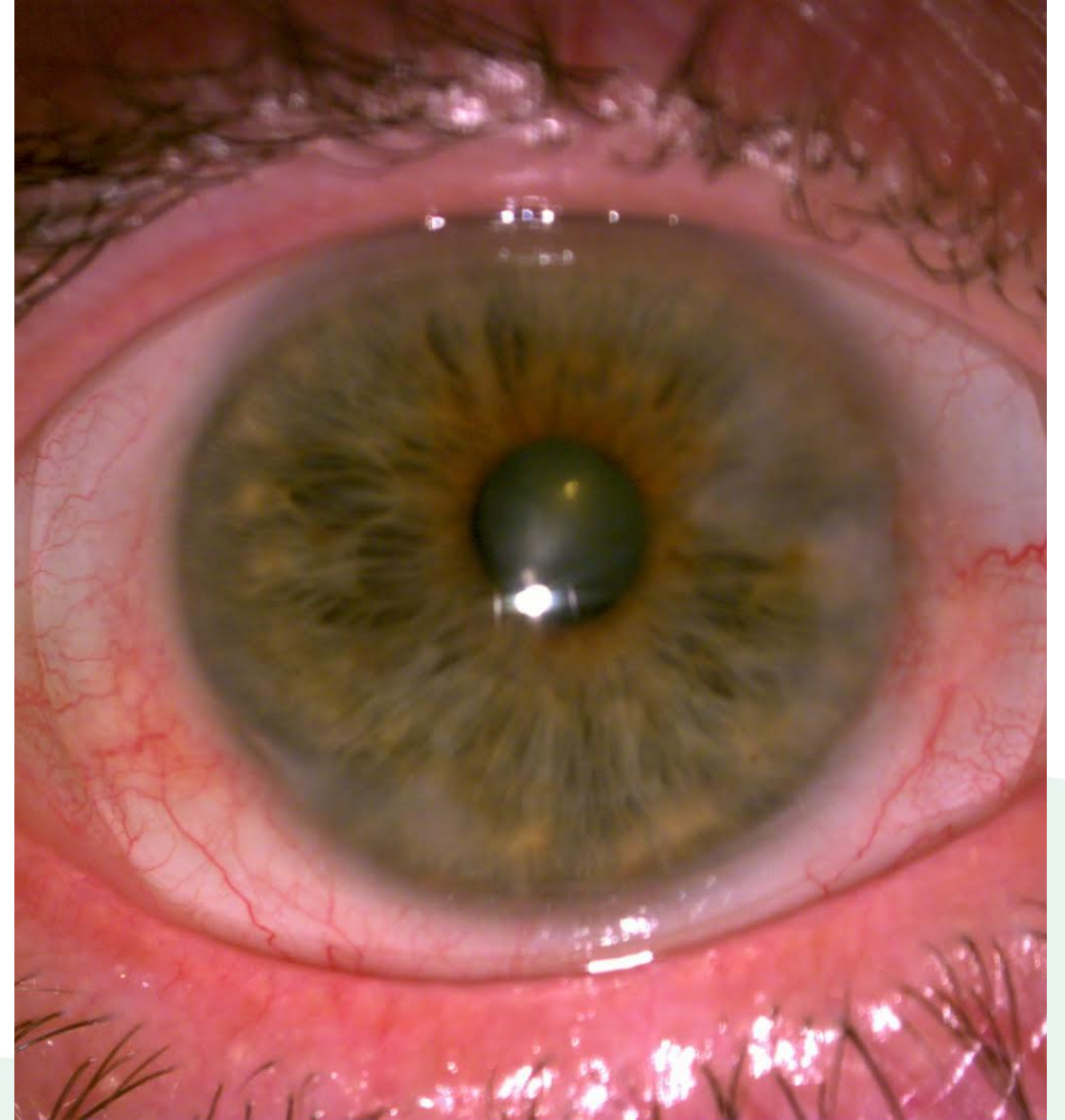
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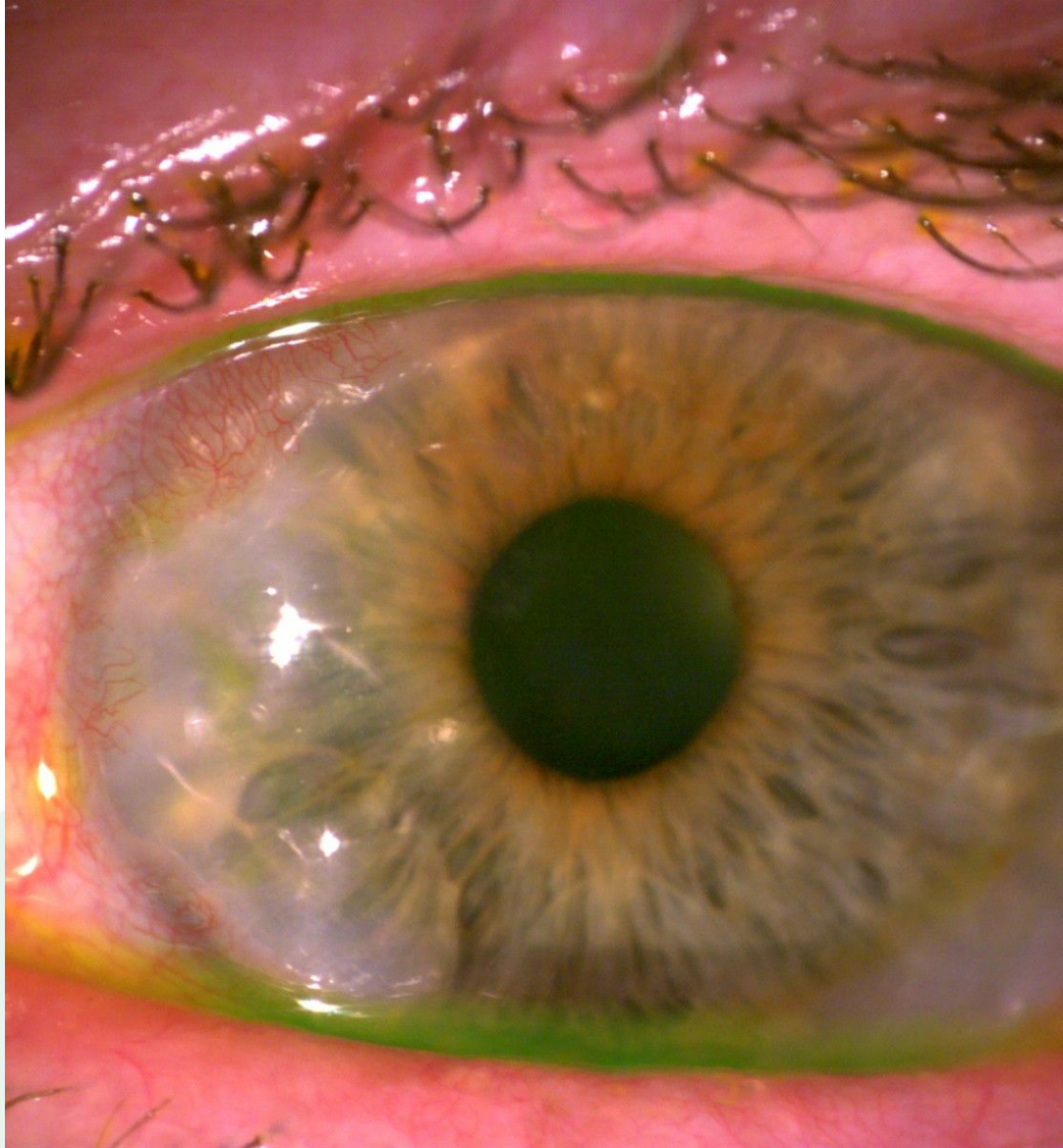


Case Report #1

- Starting dry eye treatment
 - Retaine MGD PF QID OU
 - Warm compresses BID
 - Omega-3 supplementation
- Fit with scleral lenses OU
 - Nutrifill recommended







Case Report #1

- Results
 - Improved dry eye relief with basic treatment
 - Eyes “whiter and brighter” per wife
 - Still getting fogging under lenses (OS>OD)
 - RTC 6 months

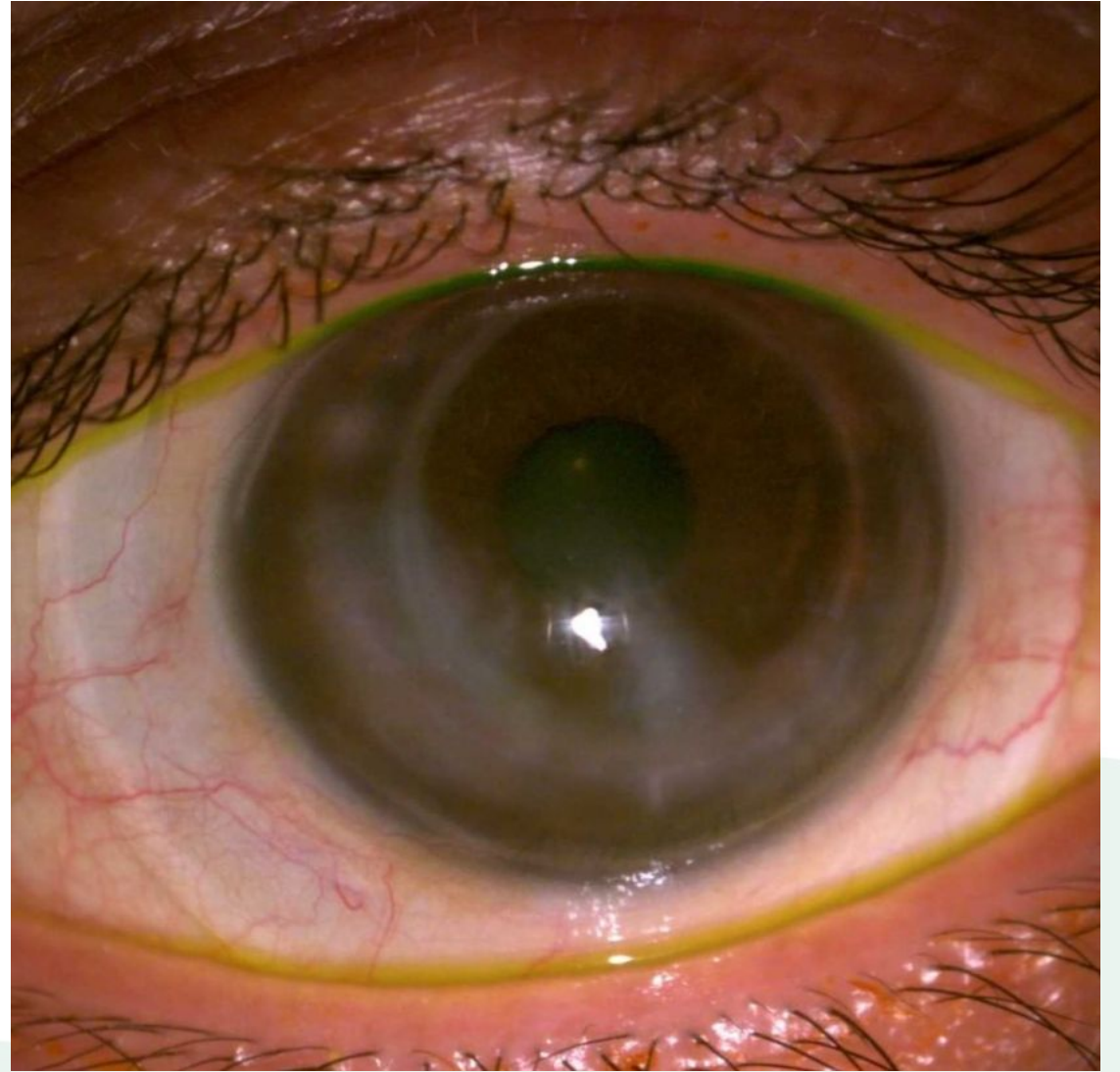
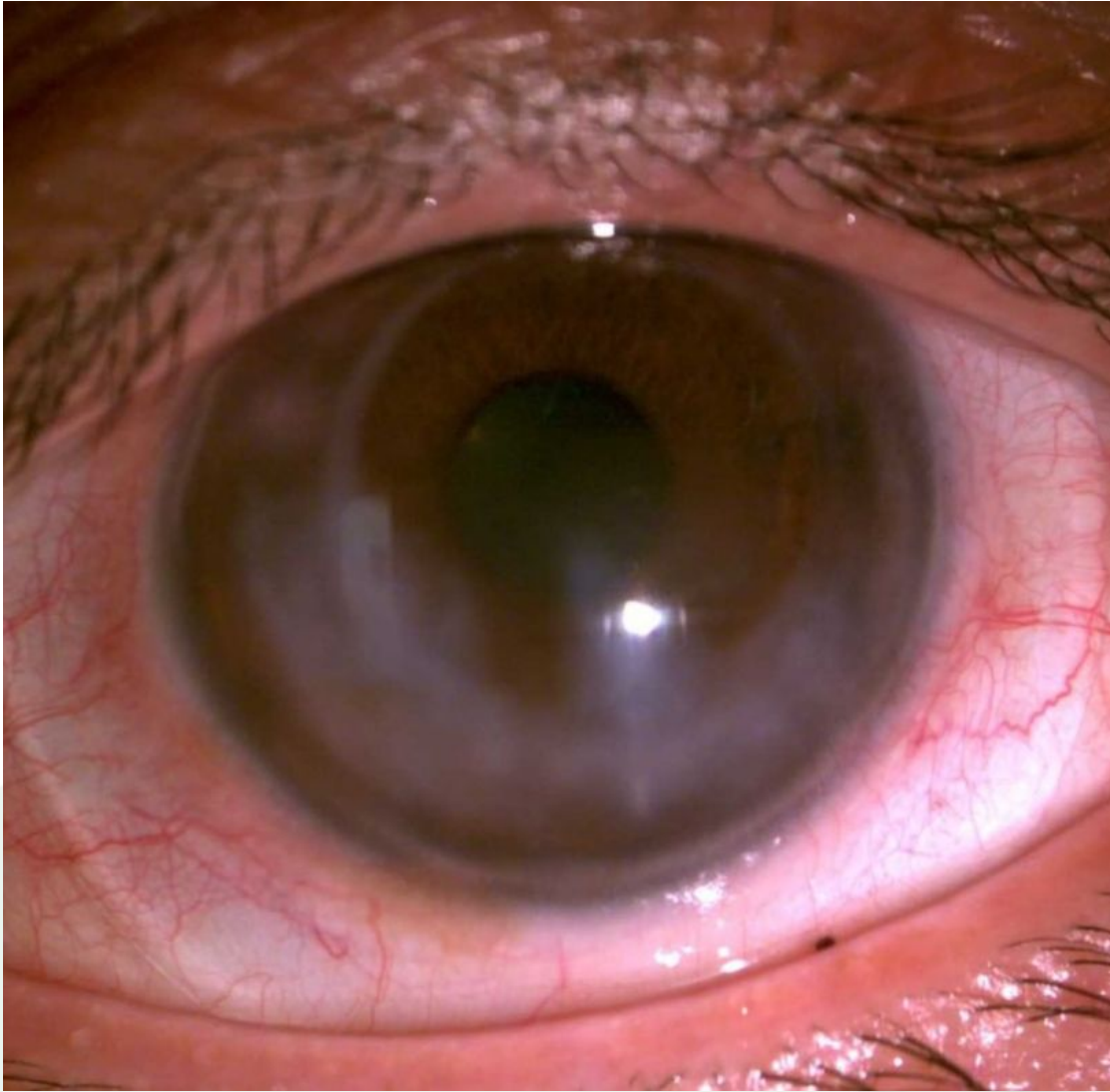


Case Report #2 – A Surprise Result!

- 48-year-old male with corneal transplants 2' to KCN
 - OD: Ks: 62.6 x 64.7 @ 118.1
 - H/O scleral lenses in past, OD great vision but uncomfortable
 - Fit with scleral lenses OU
 - Filling solution: Addipak
 - No complaints of dryness, no drop usage





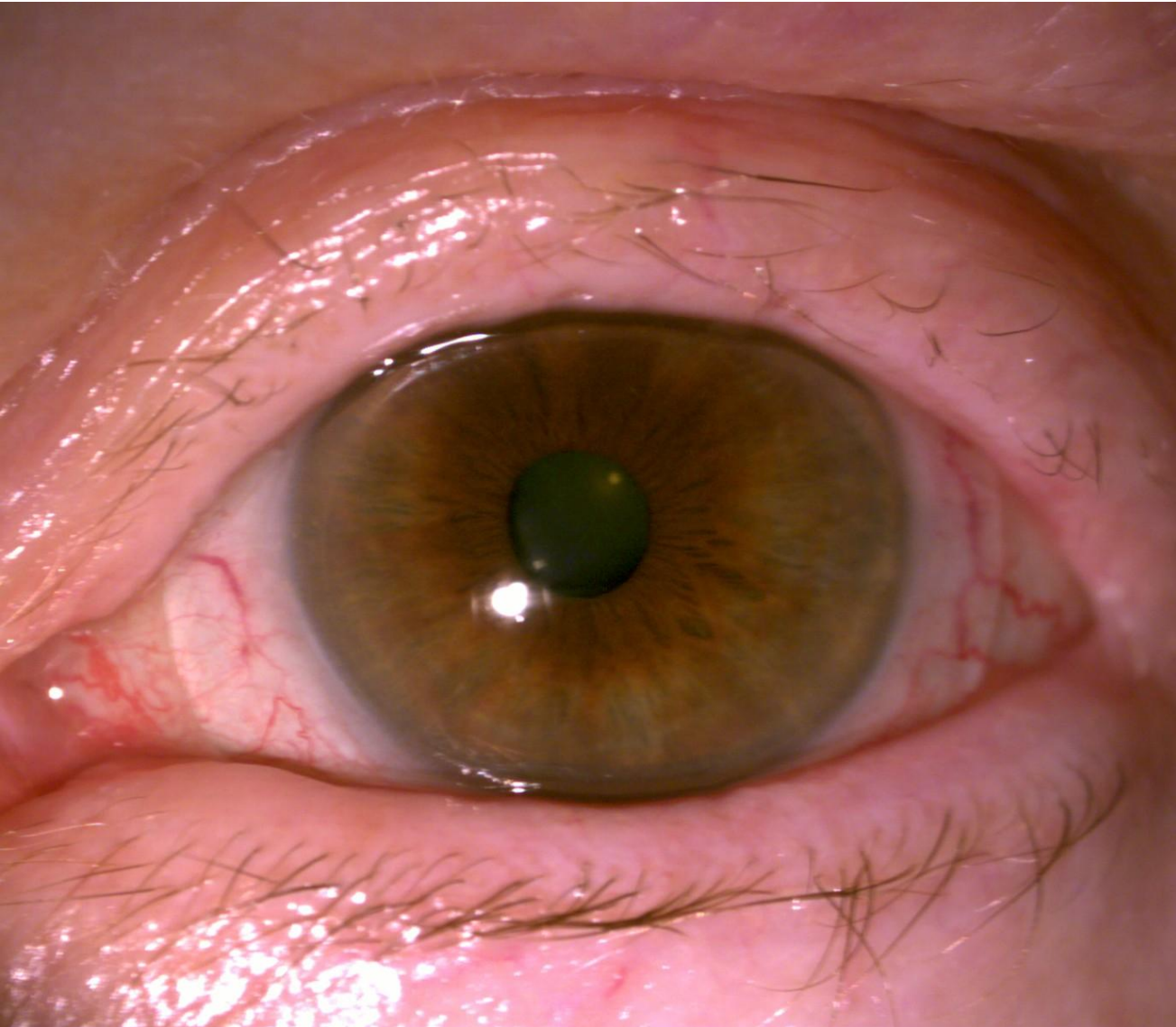


Case Report #3

- 66-year-old female with Exposure Keratopathy and Ocular Cicatricial Pemphigoid
 - Triggered by lagophthalmos from blepharoplasty
 - H/O LASIK 15 years ago
 - C/O burning, pain, extreme light sensitivity, inability to look at lights, phones, drive, watch TV
 - Rituximab infusions 2x (monoclonal antibody), Trazodone 50mg PO, Prednisone 40m, etc.
 - Restasis BID (improvement), Systane Complete, Systane gel qHS, Refresh PF tears “constantly”, Omega-3 supplementation

Case Report #3

- Dark sunglasses
- Delicate handling of patient experience
 - Decrease light in office
 - Extra time in-office
 - Staff ability to answer FAQs
- Expectation setting



Presentation

- Meibomian gland atrophy
- Rough skin on upper and lower eyelids
- SPK OU 2+

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Case Report #3

- Fit with scleral lenses OU
- Results after 3 months of wear
 - Pain reduction to 2/10 while wearing lenses
 - Pain reduction to 6/10 when not wearing lenses
 - Can use computer and phone
 - Can drive autonomously



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Thank You!

Questions?



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