




Martin Robinson

Getting started in speciality contact lenses and real world applications

Restore vision, reorder, refit, rejuvenate or refer?


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Former Practitioner member of the Optometrist Board of Australia.


1





LEARNING OBJECTIVES

Restore vision, reorder, refit, rejuvenate or refer?

- 

Learn how to improve lid and lash health for contact lens wear.
- 

Learn how to manage protein and lipid build up on hard contact lenses.
- 

Learn how to Troubleshoot vision and comfort complaints.
- 

Learn the information to include in a referral.

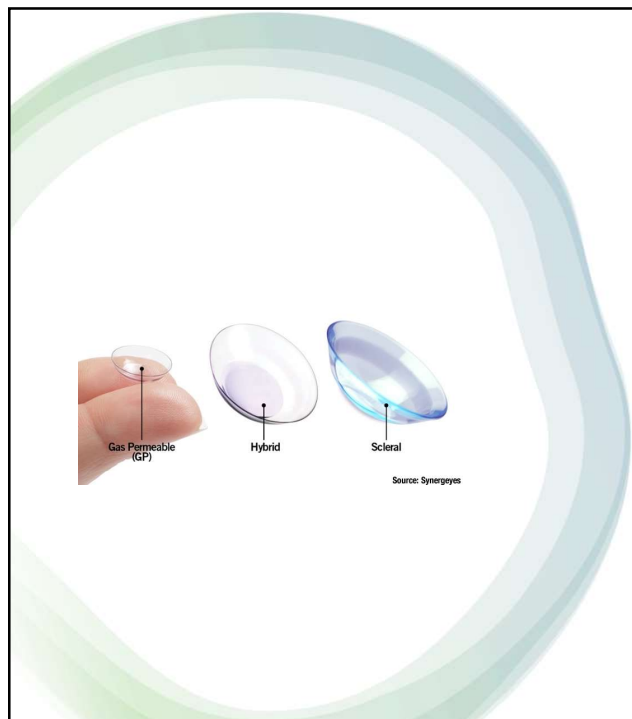
2




Financial disclosures

- The Following Companies have paid me to present educational content and advice
- Alcon
- Seqirus
- OA
- Good Optical
- Rohto Mentholatum

3




What are our Contact Lens Options




- Conventional Soft
- Corneal RGP – Sphere, FST, Bitoric
- OrthoK
- Corneo-scleral GP
- Scleral
- Hybrid – Synergeyes

4




Why choose RGP/Custom contact lenses?



- High Astigmatism
High Cyls, unstable Soft fitting optics
- Previous eye surgery/trauma/Irreg corneas
KC, PMD, ectasia, Grafts etc
- Keratoconus
Australia - Highest prevalence in the world, 1 in 30
- High prescriptions
- Ortho-K/Myopia Control
- Low cyls in Multifocal designs
- Anisometropia

5

Scenario 1.



- **Existing RGP wearer comes in for review as they are not happy.**

You have never seen them before, what goes through your mind?

- **Panic and cancel the patient.**
- **Examine the patient and plan to refer out to another optometrist.**
- **Automatically reorder their current RGP lenses again.**
- **Plan an over refraction and order the same parameters with new powers.**
- **Or do all of these thoughts go through your mind....**

- **Or do you say “I’ve got this, I can do it.”**

6

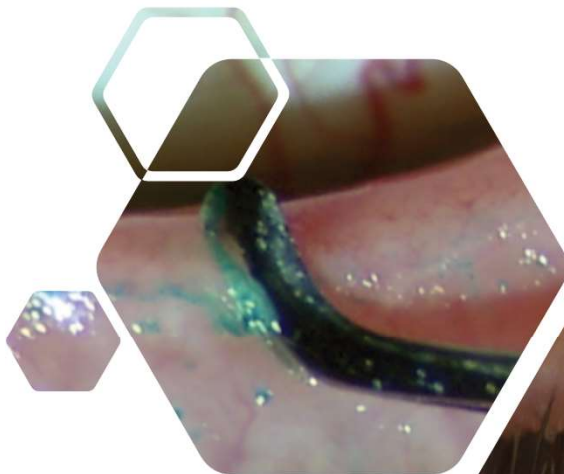
Keep your patients
wearing CLs..

“LLPPEPR”
Look, Lift,
Pull, Push,
Educate,
Prescribe,
Review.

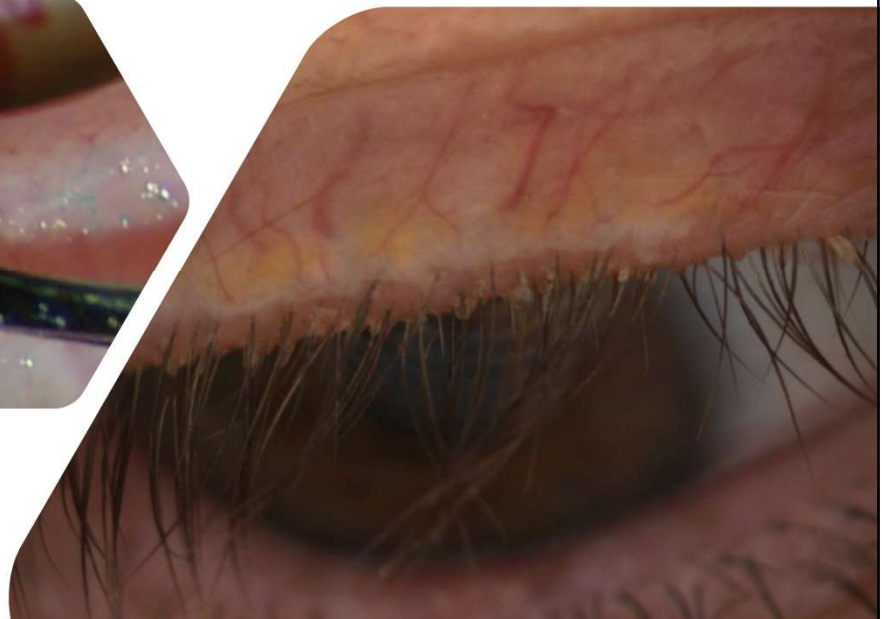
- **Essential Signs**

- **Look** for Froth on lid margins or floating on the tear film.
- If dermatochalasis – **Lift** – and check the lid folds! Froth is evidence of higher levels of bacterial flora.
- **Pull** on lashes to reveal Demodex.
- **Push** for meibomian gland expression.
- **Look/Lift/Pull/Push** to check for makeup where it should not be
- **Educate, Prescribe and Review** - Remember CL wearers are known to have a changed biofilm, be part of the solution, they will thank you.

7

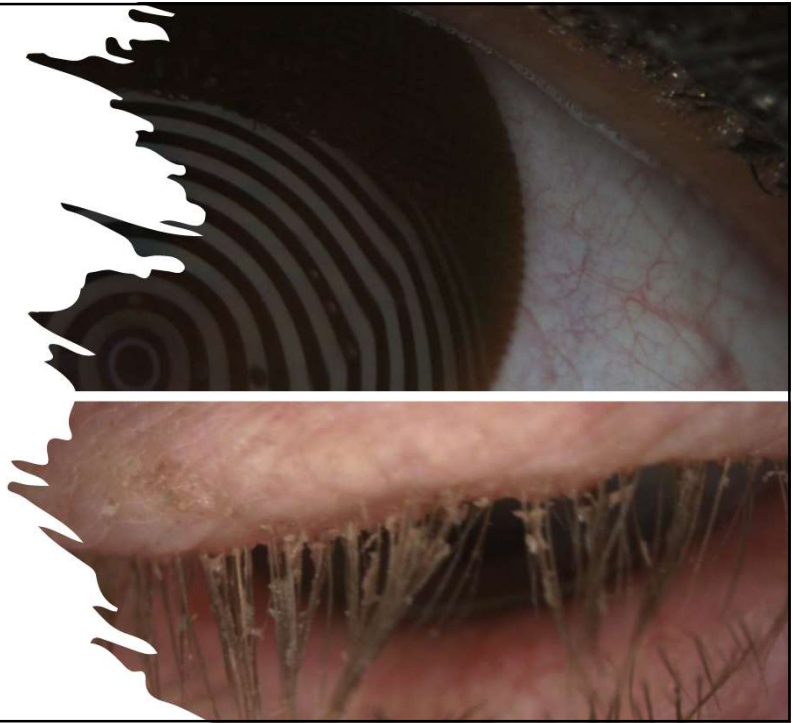


Above: Biofilm on lid margin
Right: Collarettes Very Strong
Demodex link.



8

Both Images are from Routine CL reviews. Both New patients to my clinic. Both had recently been fitted with New CLs and came to me for problem solving.



9



Make Up residue



10

Preparation is key :- Healthy lids – happy contact lenses.

You, the practitioner are best placed to treat Blepharitis in clinic

- ZEST kits, BlephEx Devices

then arrange for patients to perform maintenance at home.

- Tea Tree Foam, Zocushield Gel, Zocular foam, Wipes

(do not use baby shampoo, it is pro-inflammatory and does not kill demodex).

Maintenance is key :- check lids at every review

Blepharitis signs – Repeat the above

Froth from Excess bacterial flora – Hypochlorous acid sprays

Lid Margins with capping, biofilm – lid debridement

Stasis? -Try to express some meibum, Nil? Clear? Turbid? Greasy?

Greasy meibum deposits on all contact lenses, reduces both wetting and vision.

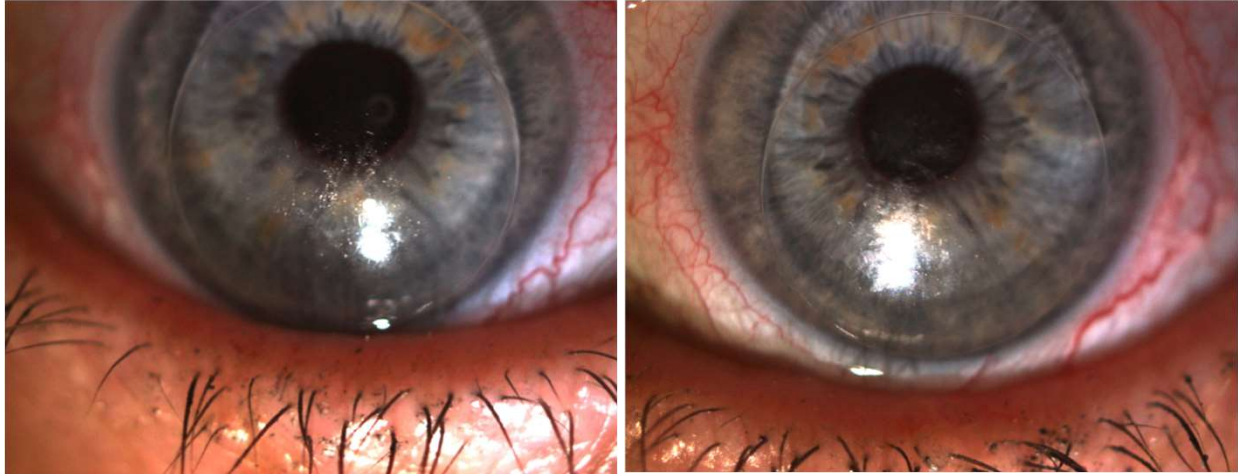
11

Case report 1. 55F RGP wearer 20+ years

- Slit lamp findings
 - Lashes showed mild blepharitis, no collarettes
 - Slight biofilm on lid margin
 - Meibomian glands expressing slightly greasy meibum, no blocked
 - RGP lenses heavily protein deposits and rapidly shed tears from the front surface
- Lenses fitting ok but.....
- Right RGP drops to the lower lid margin with a down blink, but often rides up to correct Position with the up blink.
- Left RGP rides low, rarely riding up to correct position.
- Admits has mixed up left and right lenses.
- Px reports - Unstable Vision, red eyes, reduced wearing time due discomfort.
- What are your thoughts?

12

Case Report 1



13

What changes do you want to make to the treatment plan?

Discussion

- Q1. What can you suggest to prevent mixing up the left and right RGPs?
 - A. Suggest a CL case with clear left right markings/colours.
 - B. Discuss always removing one contact lens first and placing it in the case before removing the other lens.
 - C. Suggest we order different tints for the right and left lenses, e.g. Green R & Blue L
 - D. all of the above.

- Q2. What do you prescribe wrt care and maintenance of the RGPs in this case?
 - A. No changes continue with Boston Simplus Multi-action.
 - B. Add a separate daily RGP cleaner
 - C. Cease Boston Simplus and change to separate cleaner/conditioner.
 - D. all of C as well as prescribing regular protein treatment.

- Q3. What care do you prescribe for the eyelids?
 - A. Warm compresses and baby shampoo at home.
 - B. Teatree based lid scrubs at home.
 - C. Lid debridement and lid clean in clinic.

14

What initial changes/plans do you prescribe? My decisions in Red

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 - **C. Lid debridement and lid clean in clinic.**

15

Protein Treatment options

- Progent from Menicon
 - Is a weekly, 2-part protein remover, disinfectant, and intensive cleaner.
 - Part A - Sodium Hypochlorite
 - Part B - Potassium bromide
 - Mixing generates hypobromide
 - Mix the two parts, A and B then place the RGP's into the mixture and leave in place for 30 mins.
 - Then Rinse well with saline then place in conditioning solution overnight.



16

Protein Treatment options



Boston One Step Liquid Enzymatic Cleaner is a clear, odorless enzymatic cleaner way to effectively remove protein deposits from gas permeable contact lenses on a weekly basis.

Proteolytic enzyme (subtilisin) as the active ingredient, and glycerol. Preservative-free.

- Place lenses in lens case and fill up to the top. It is important that the lens case is completely filled with fresh conditioner solution to ensure proper dilution of the Boston One Step Liquid Enzymatic Cleaner and reduce any chance of irritation.
- Squeeze 2 drops of Boston One Step Liquid Enzymatic Cleaner into each lens well.
- Soak lenses for at least four (4) hours (or overnight) before wearing to ensure proper cleaning and disinfecting. Always use fresh solution for soaking and storing lenses. Discard container immediately after use.

17

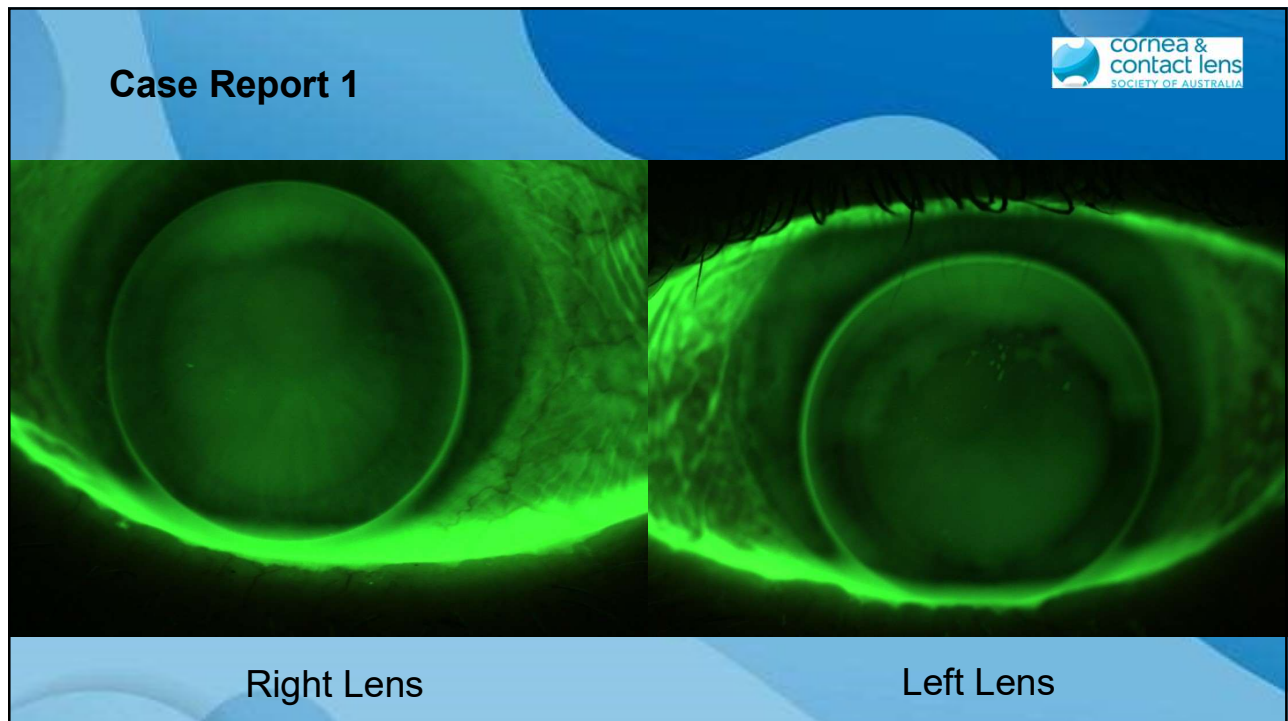
Case Report 1

Blink Video of Right RGP

18

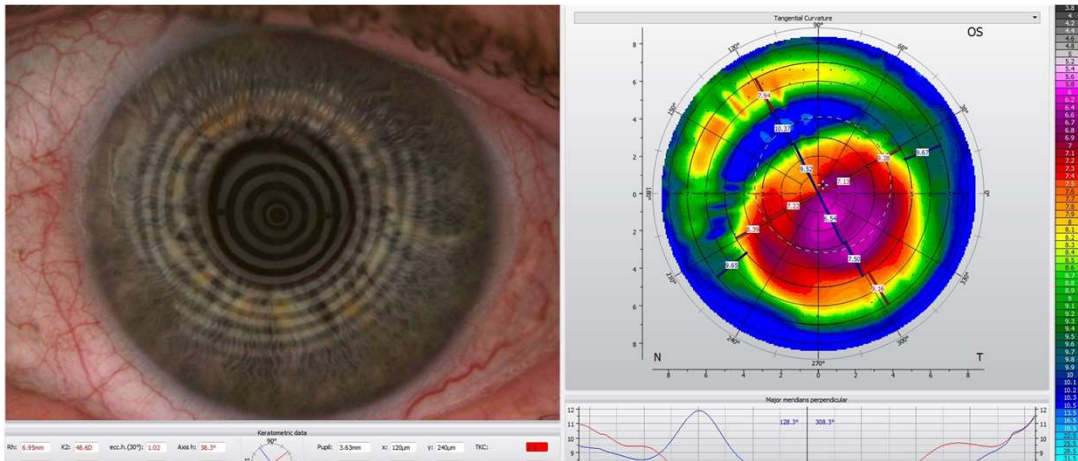


19



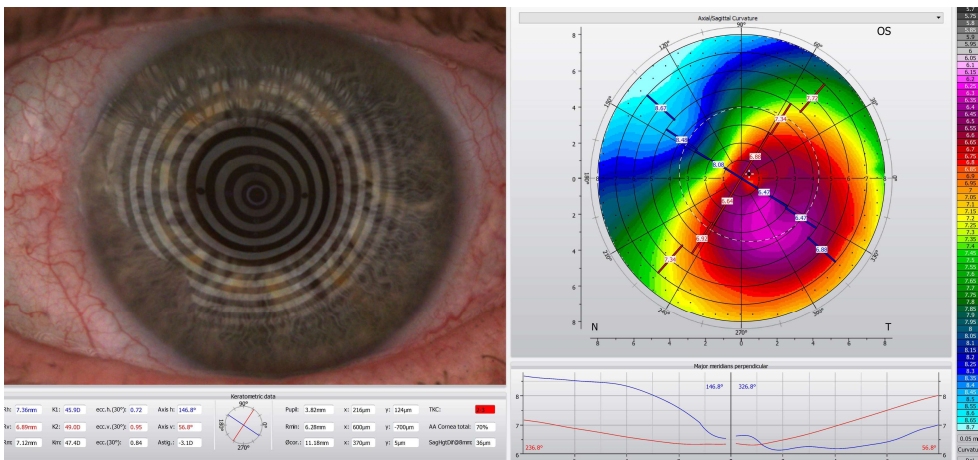
20

Left topography- what are your thoughts?



21

This topography was performed on the same eye but after not wearing her RGP for 7 days. Stable tear film, no imprint from the RGP, and an Axial Map



22

REFIT and REFINE



- Rose K2 fitting guide – easy to find with google. (below - directly cut from the guide)

Rose K2 parameters available

BASE CURVE 4.20 mm to 8.80 mm
 DIAMETER 7.50 mm to 11.00 mm
 POWER Varies with material EDGE
 LIFT Standard (0) Standard flat (+1.0)
 Standard steep (-0.5) More lifts are
 available in 0.1 increments ranging from
 -1.3 decreased (steep) to +3.0
 increased (flat).

All ROSE K2 designs follow the same simple, systematic five step fitting process:

- Step 1:** Base Curve Selection Select the base curve that yields a central fit appropriate for the design (see Fitting Chart on page 4).
- Step 2:** Peripheral Fit Adjust the periphery to yield an even fluorescein band 0.5 mm to 0.7 mm in width.
- Step 3:** Diameter Select the minimum diameter that yields good location and movement.
- Step 4:** Location Adjust parameters such that the lens hangs off the top lid and is well clear of the lower limbus.
- Step 5:** Movement Adjust parameters to achieve movement on blink of 1.0 mm to 1.5 mm.

23

Let's work it out for our lady



Mean K flatter than 7.0 mm: Select first trial lens 0.2 mm steeper than mean K reading.
Mean K between 6.0 - 7.0 mm: Select first trial lens equal to mean K reading.
Mean K steeper than 6.0 mm: Select first trial lens 0.4 mm flatter than mean K reading (less predictable).
Objective: Light, feather touch at apex of cone. (See fluorescein images section.) (Rose K2 Guide)

Her left mean K was **7.12 mm** Suggests a trial lens 0.2 mm steeper than the mean = **6.92 mm** and she was wearing **6.75 mm**

so someone did not quite follow the guide or went too far, or the eye has changed?

Once optimum central fit is achieved, assess edge lift.
Look for an even fluorescein band of 0.5 mm to 0.7 mm in width.
Order increased (flat) or decreased (steep) edge lift accordingly. (Rose K2 Guide)

Her old RGP had an edge lift of **0.1-0.2 mm** relatively even but not ideal
 Following the guide aim for **0.5-0.7 mm** edge lift so ask for **+0.50 edge lift add**

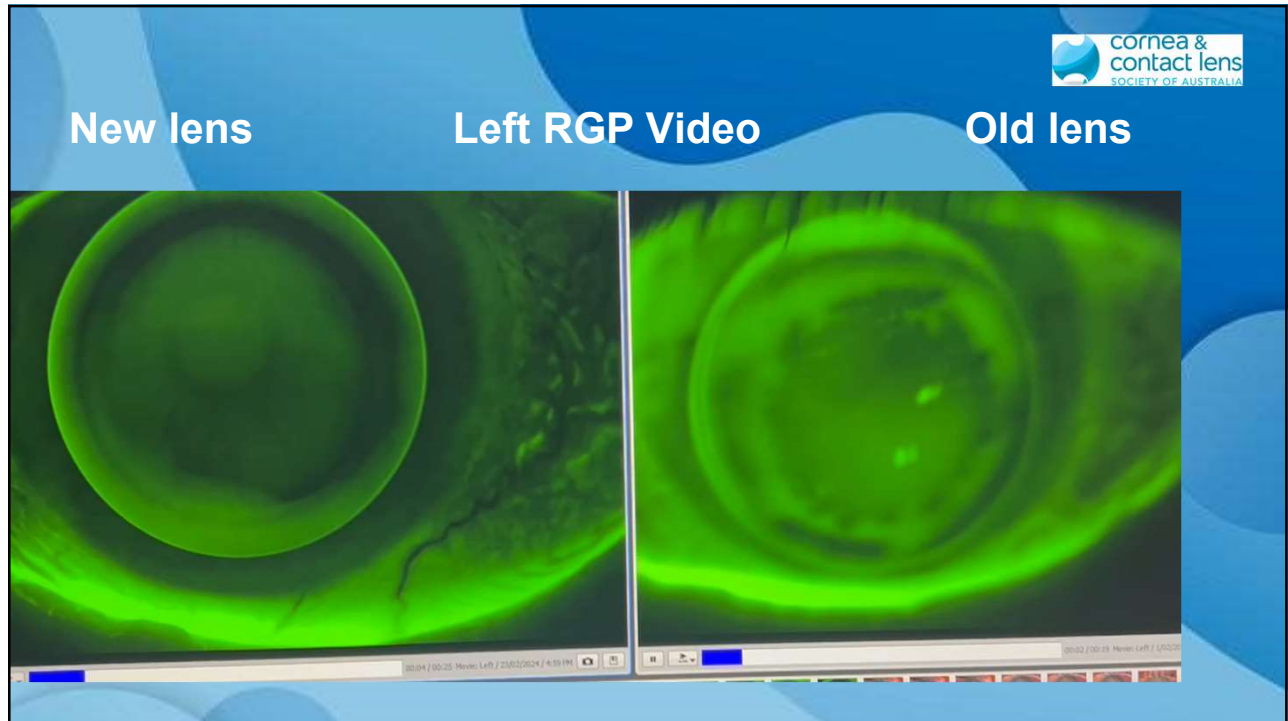
Lens as ordered from this guide

Left 6.85 / 8.7 with +0.50 edge lift Boston XO Blue

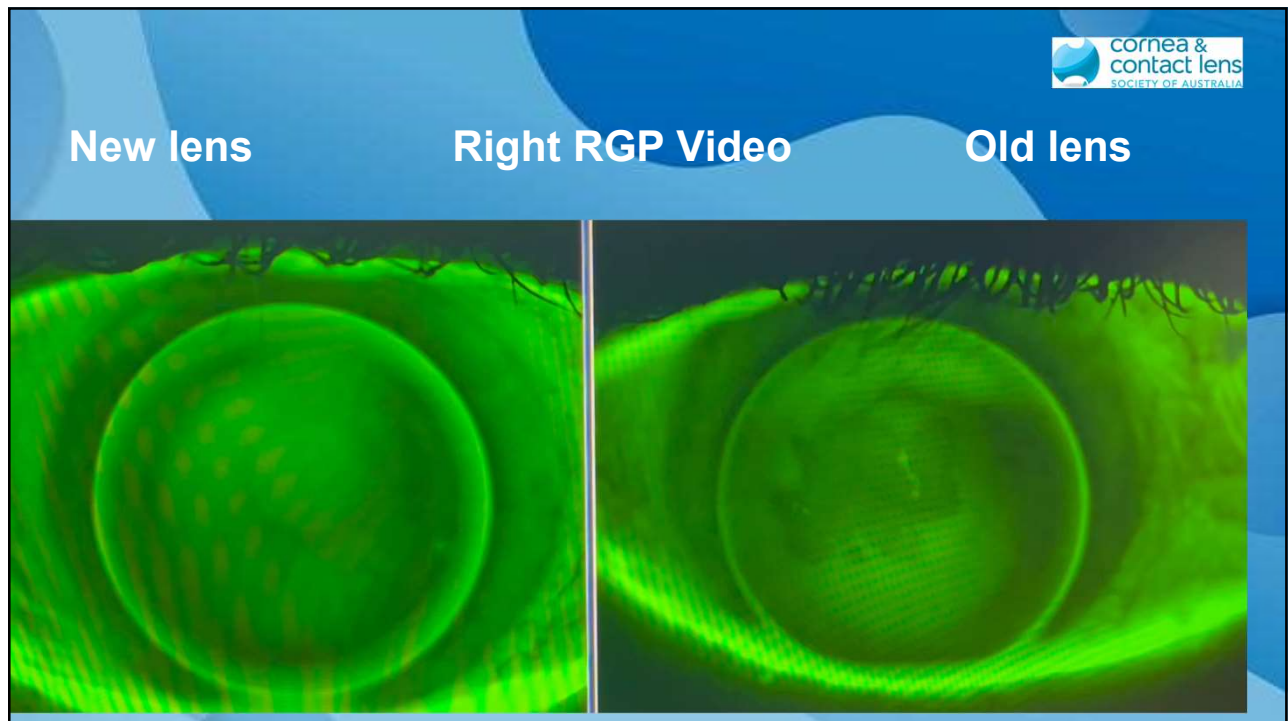
the original lens was a little too steep and 6.75,

I went 2/3rds of the way to the guide's 6.92mm

24



25



26

Case 1 final summary



Delivery

Both lenses comfortable though she could feel them a little bit at first insertion

This improved to fully comfortable after 10 mins.

After 10-15 mins RGP wear she had Visual Acuity of R 6/9+ L 6/9+ O.U. 6/9++

They were clearer than her spectacles that she wore into the consultation

5 day review

Has worn the new lenses every day for an average of 10 hours

Comfort Perfect comfort- rarely needs drops now, removal much easier

Stability Very stable no problems, (She never realised how often they dislocated in the past)

Vision in the real-world - Patient very happy

Visual Acuity of R 6/6-L 6/6- O.U. 6/6 – Negative comment her Near VA reduced in low light

Care and maintenance plan prescribed

Menicon Spray and clean, Menicare Plus Conditioner, Progent treatment once every 2weeks

Review in 3 months If still all clean will revert to every 6 months.

27

Case report 2 - 55M RGP wearer 20+ years Referred to me



History included with referral

Condition: Myopic Astigmatism

Started RGP wear in 1992, Records supplied since 2013

Current RGPs 12 months old, lenses feel stuck and dry. Refit advice requested.

Spectacle prescription

R -6.25/-0.50x20 6/6 Near Add +0.50

L -6.25/-1.00x5 6/6 Near Add +0.50

RGP prescription ACL RGP,

R 7.55/9.5/-5.50

L 7.55/9.5/-6.00

Vision with RGPs -

NOT SUPPLIED

Material - **NOT SUPPLIED**

Care products used -

NOT SUPPLIED

Colour - **NOT SUPPLIED,**

What are your thoughts?

28

Case report 2

Case History/Slit lamp findings

Dry, poor comfort since delivery (12 mths prior),

Takes lenses out 3-4 times a day to clean.

Care system - Boston Advance Conditioner and Cleaner, no protein removal
(I rang Gelflex/ACL and found the material Boston XO, Col R Green L Blue.)

XS oil and protein deposits and rapidly shed tears from the front surface

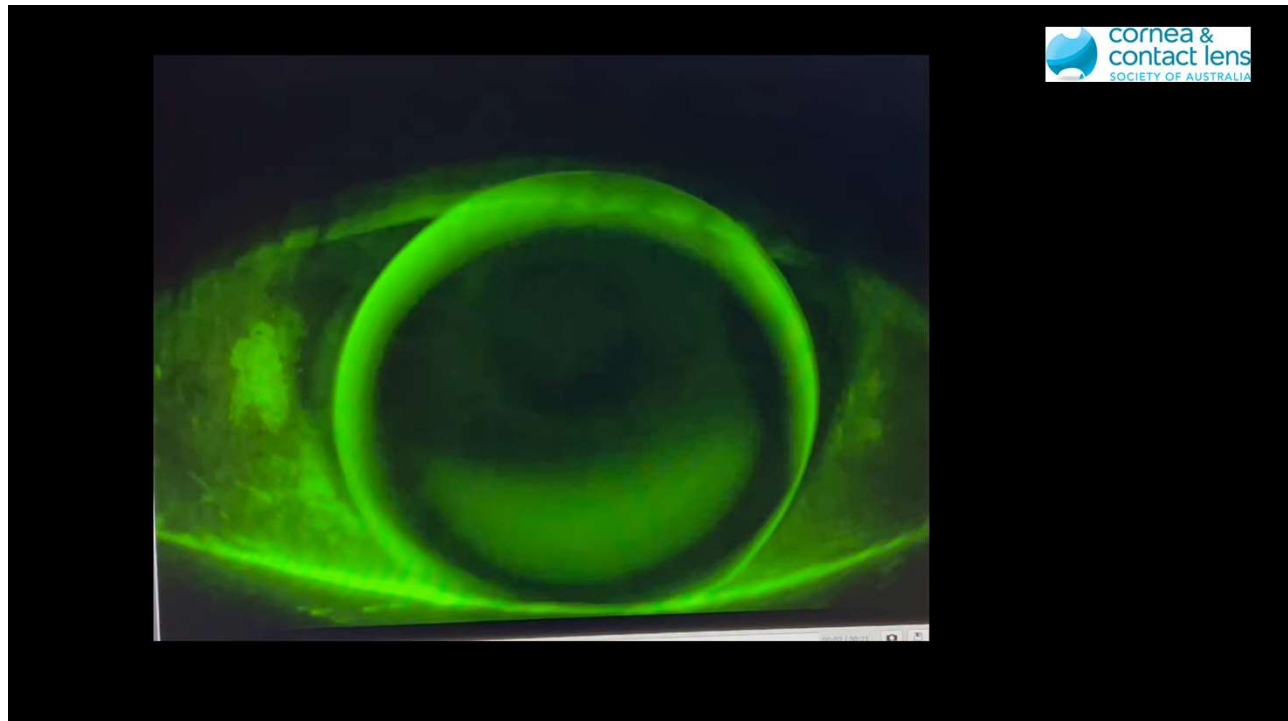
Fit loose, movement excessive, excessive edge lift,

Both lenses ride high, caught under upper lid with each blink, later drops down

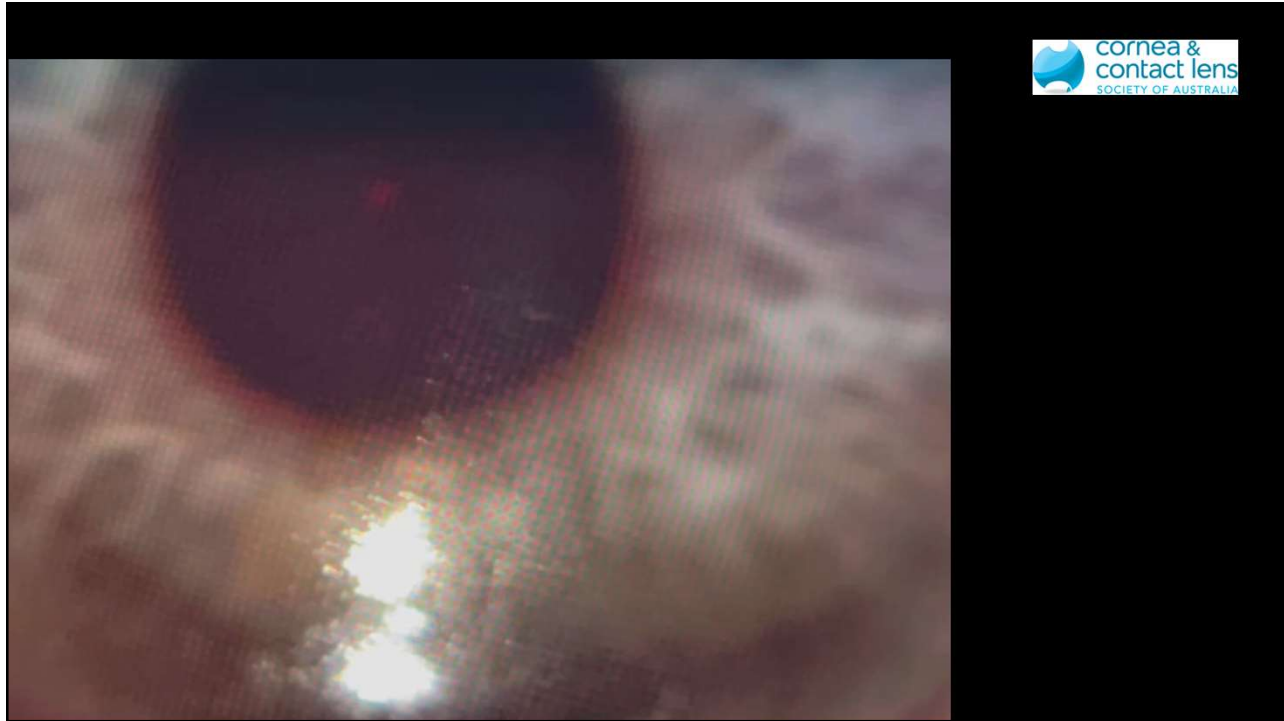
Several Meibomian glands capped, expressed meibum greasy and frothy,

Froth also seen at both nasal and temporal corners

29



30



31

What changes do you make/prescribe/discuss?



- Q1. What RGP details should you include in a referral?
 - A. Base Curve, Diameter, Power
 - B. Company, Design, Base Curve, Diameter, Power
 - C. Company, Design, Base Curve, Diameter, Power, Material Tint colour/s
 - D. All of C and Vision with RGPs.
- Q2. What care do you prescribe for the eyelids?
 - A. Warm compresses and baby shampoo at home.
 - B. Lid debridement in clinic, Blephasteam and Hypochlorous acid spray
 - C. Have a discussion with Patient about options, New RGPs/Lid care/Lens Care
 - D. All of B and C.
- Q3. What do you prescribe wrt care and maintenance of the RGPs in this case?
 - A. No changes continue with Boston Advanced Conditioner and Cleaner.
 - B. Cease Boston Advance start new cleaner/conditioner/protein treatment
 - C. Continue with Boston Advance and add a protein treatment
 - D. No changes, reorder new RGPs

32

What changes do you make/prescribe/discuss?



My decisions in Red

- Q1. What RGP details should you include in a referral?
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 - A. Warm compresses and baby shampoo at home.
 - B. Lid debridement in clinic, Blephasteam and Hypochlorous acid spray
 - C. Have a discussion with Patient about options, New RGPs/Lid care/Lens Care
 - **D. All of B and C. Px not keen to replace RGPs wants to try simple changes first**
- Q3. What do you prescribe wrt care and maintenance of the RGPs in this case?
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 - **B. Cease Boston Advance start new cleaner/conditioner/protein treatment**
 - C. Continue with Boston Advance and add a protein treatment
 - D. No changes, reorder new RGPs

33

Plan decided on



- Patient wants to keep Lenses as is
- Essential care – Improve lid health
 - Hypochlorous acid spray 1/day to reduce Flora
 - Lid debridement to remove caps
 - Blephasteam to improve Meibum
- Essential care – Improve RGP surface
 - Change products as they are not working
 - Menicon Spray and Clean
 - Menicon Menicare Conditioner
 - Blink-N-Clean eye drops helpful
 - Progent protein 2 weekly
- Advised 6/12 reviews to monitor things and we can refit RGPs when he is ready

34

Results

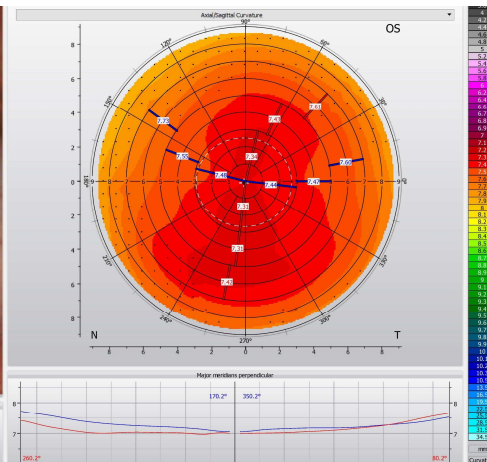


- Px happy, symptoms fully resolved
- No capping, no froth, clean lids and lenses
- No longer has to remove RGPs to clean though the day, (was 3-5 times a day)
- Comfort significantly improved no longer Dry
- Vision more stable
- Lenses more stable not being caught by the upper lid as often
- Px happy to continue with current lenses
- Consider refit every 6 months
- Finally ready for a refit 2 years later.....

35

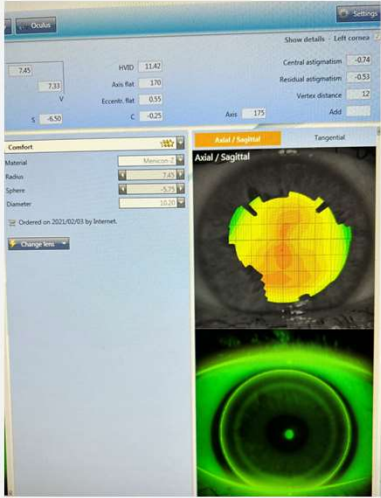
Refit pathway

2 years later I redesigned his lenses using Easyfit from Menicon.



| Biometric data | | Pupil | | K1 | | K2 | | K3 | | K4 | | K5 | | K6 | | K7 | | K8 | | K9 | | K10 | | | | | |
|----------------|--------|-------|-------|------------|------|---------|--------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|
| BL | 7.45mm | KS1 | 45.30 | ecc.N(DPR) | 0.57 | Axis(N) | 170.2° | Axis(N) | 80.2° | Axis(N) | 80.2° | Axis(N) | 80.2° | Axis(N) | 80.2° | Axis(N) | 80.2° | Axis(N) | 80.2° | Axis(N) | 80.2° | Axis(N) | 80.2° | Axis(N) | 80.2° | | |
| BL | 7.23mm | KS2 | 46.10 | ecc.N(DPR) | 0.57 | Axis(N) | 80.2° | Axis(N) | 80.2° | Axis(N) | 80.2° | Axis(N) | 80.2° | Axis(N) | 80.2° | Axis(N) | 80.2° | Axis(N) | 80.2° | Axis(N) | 80.2° | Axis(N) | 80.2° | Axis(N) | 80.2° | Axis(N) | 80.2° |
| BL | 7.29mm | KS3 | 45.70 | ecc.N(DPR) | 0.57 | Axis(N) | 80.2° | Axis(N) | 80.2° | Axis(N) | 80.2° | Axis(N) | 80.2° | Axis(N) | 80.2° | Axis(N) | 80.2° | Axis(N) | 80.2° | Axis(N) | 80.2° | Axis(N) | 80.2° | Axis(N) | 80.2° | Axis(N) | 80.2° |

36




The screenshot shows the EasyFit software interface. On the left, there are input fields for parameters like HVID (7.45), Axis Rot (170), Eccentr. Rot (0.55), and C (-0.25). On the right, there are calculated values for Central astigmatism (-0.74), Residual astigmatism (-0.51), and Vertex distance (12). Below these are tabs for 'Axial / Sagittal' and 'Tangential', with corresponding topographic maps showing corneal curvature and a fluorescein map of the proposed RGP lens.

Using Menicon's EasyFit -

You can import topography from most devices

- Base curves HVID, flat axis, central astigmatism import automatically.
- You manually enter the spec Rx
 - The program suggests a design including parameters
 - It calculates any residual astigmatism
 - It creates a hypothetical Fluorescein map of the RGP proposed
- Very Few Topographers near me.
 - I offer to perform topography and send it back
 - Some optometrists will design and order RGPs from this data
 - This supplements trial lens fits and can reduce the number of fitting attempts




37

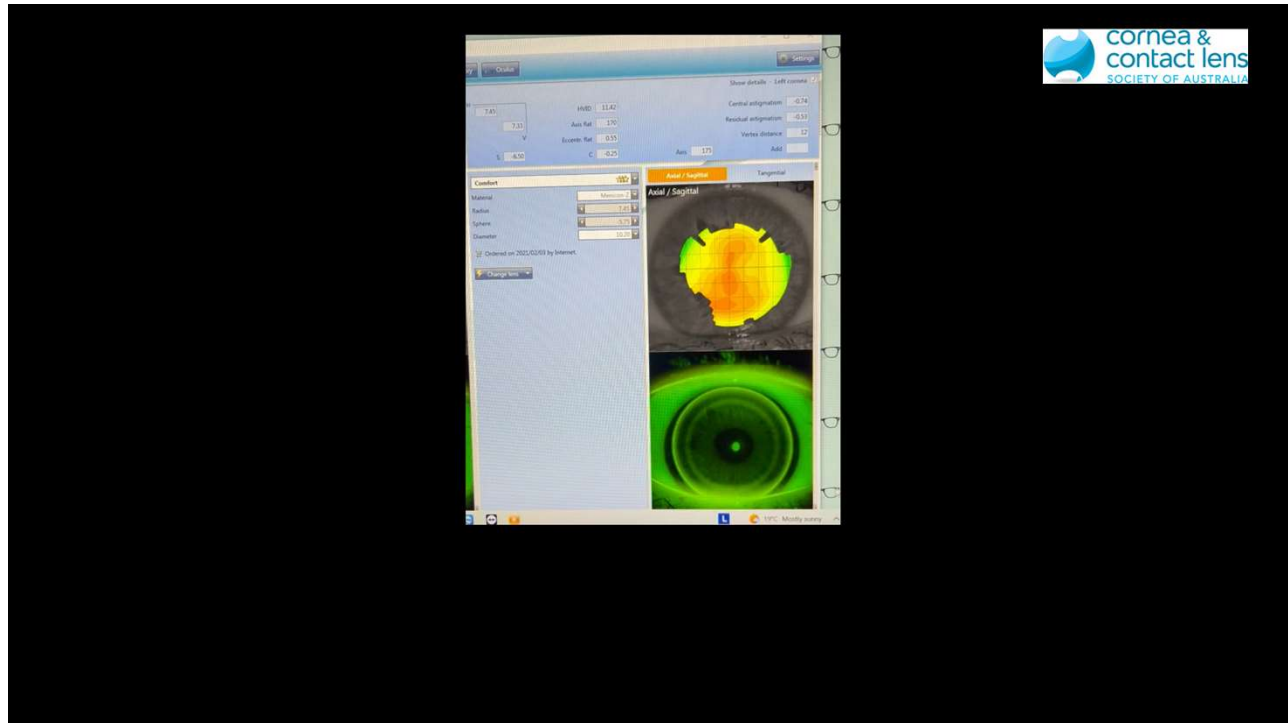
Menicon vs Original ACL RGPs

Lets look at the left lens

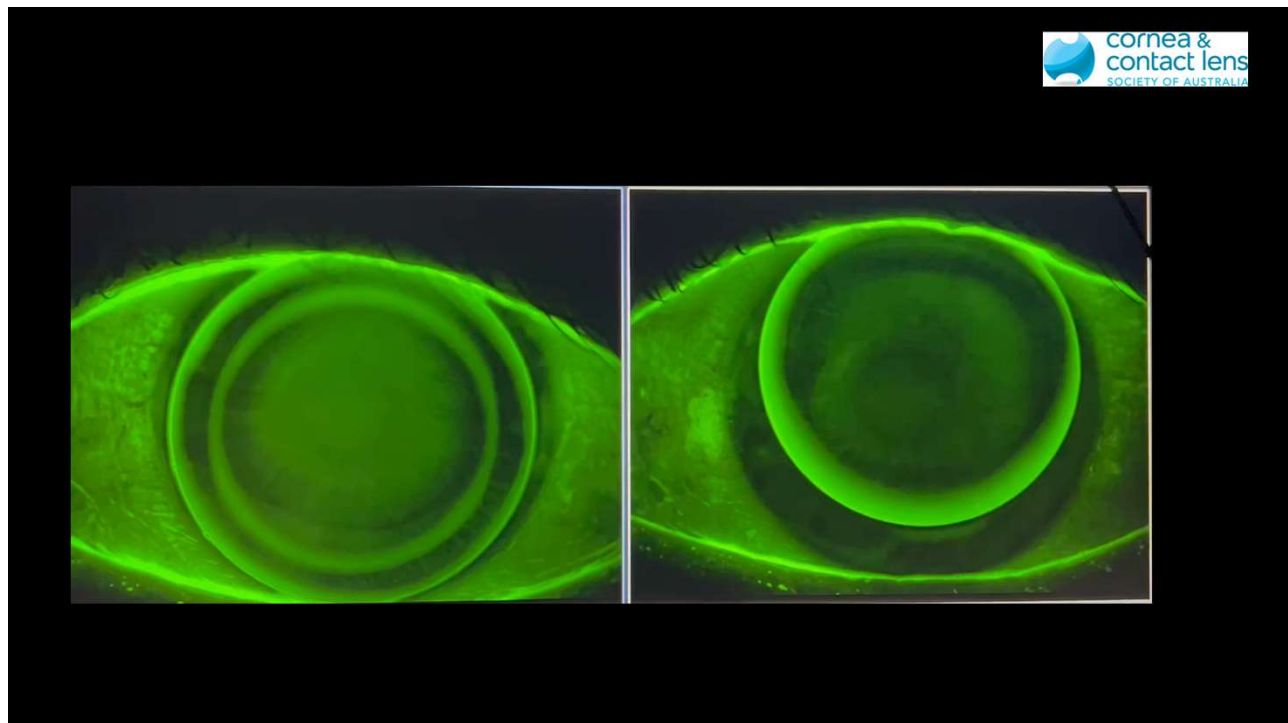
- Original left was ACL spherical 7.55/9.5/-6.00 designed to fit on K (on flattest K, or slightly flatter)
- Our Patients flattest K was 7.45 (7.45/7.33) so slightly different from the original lens. Which may explain the slightly flat fit with extra edge lift.
- New Lens proposed by Easy Fit
- Comfort design – also spherical and to fit on flattest K - 7.45/10.2/-5.75
- The hypothesised video of the fit looks better. But High riding lenses tend to have too much lid interaction due to the lens being too large.
- But you have to start somewhere- I ordered the suggested lens design from Menicon




38




39



40



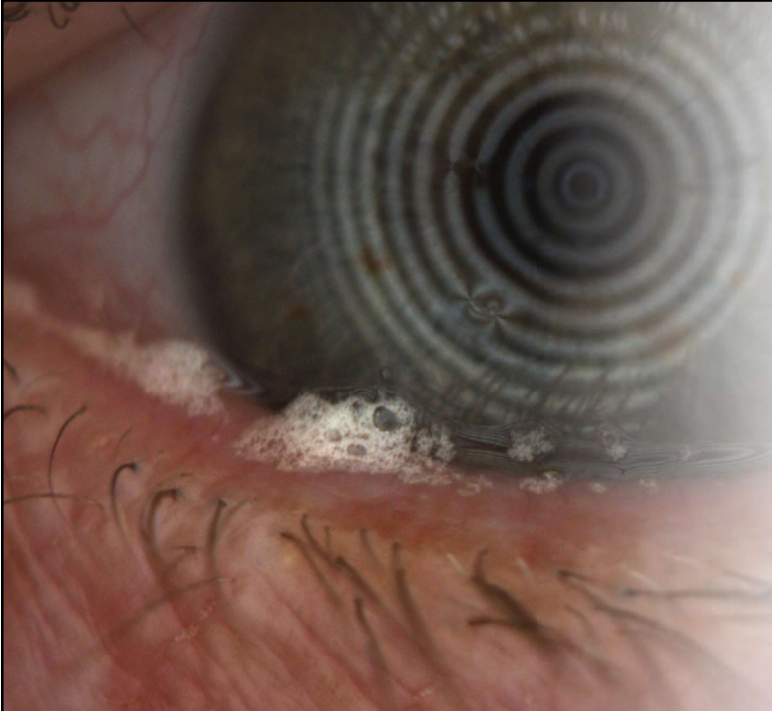



Results

- The new RGPs fitted better
- Located centrally and rode less high, less often
- Vision more stable
- VA 6/5 O.U. with Old lenses saw 6/6 O.U.
- Continues to use Menicon Spray and Clean
- Continues to use Menicon Menicare
- Continues to use Progent 2 weekly
- Continues to use Hypochor 1/day
- Lid health is stable
- RGP surface debris are controlled
- **This is a case anyone could have triaged and fitted.**

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41





• Final Thoughts

Triage with slit lamp.
Treat the eye!
Don't worry, we all make mistakes!
Seek advice from colleagues or companies.
Your Contact lens companies often know more than you !

Thank you.

- Martin Robinson
- You are not alone
martinrobinsonoptom@gmail.com.au

42