

Case Report:

Truly custom scleral lens for dry eye

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Dr. Richlin graduated with a bachelor's degree in molecular cell and developmental biology at the University of California, Santa Cruz, before earning his Doctor of Optometry from the Southern College of Optometry in Memphis Tennessee. He currently practices at Dr. Richlin, OD & Associates in Beverly Hills, California. Dr. Richlin is skilled in delivering a wide range of optometric services, including the treatment and management of eye diseases, specialty contact lenses, corneal refractive therapy, and the preoperative and postoperative care of patients. In addition he also serves on the board of the Los Angeles County Optometric Society.



Introduction

Female patient age 38 presented with dry eye disease. She is a -7 myope and has worn premium soft contacts her whole life.

Background

This patient suffers from dry eye disease and Superficial Punctate Keratitis (SPK). She is using 10 drops a day of artificial tears to help her dry eye. She is wearing soft contact lens and has been wearing lenses for a very long time. She has good vision with her lenses but due to the dry eye, comfort is an issue. A scleral lens is suggested to provide relief from the dry eye symptoms.

Profilometry Measurement

The decision was taken to design a freeform scleral lens using BostonSight SCLERAL Smart360® technology. Both eyes were measured with the Eye Surface Profiler (ESP) from Eaglet Eye (The Netherlands). This profilometer gathers more than 500,000 data points of the cornea and the sclera (Figure 1) for a truly custom scleral lens fit.

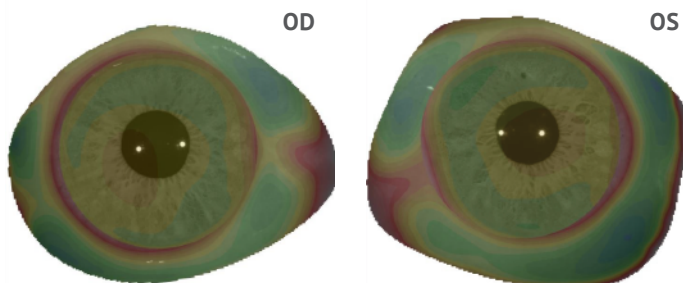


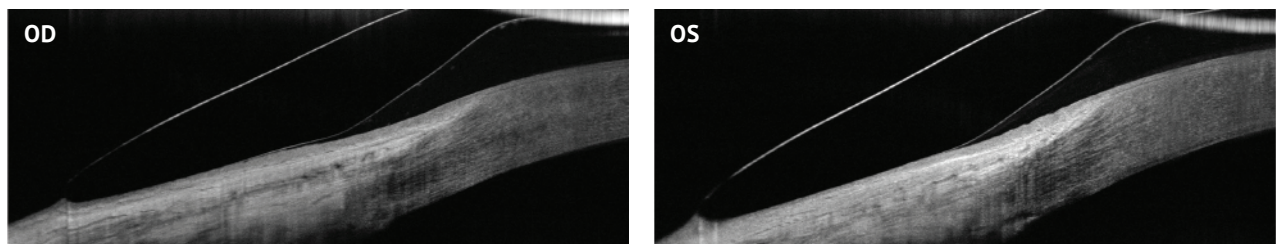
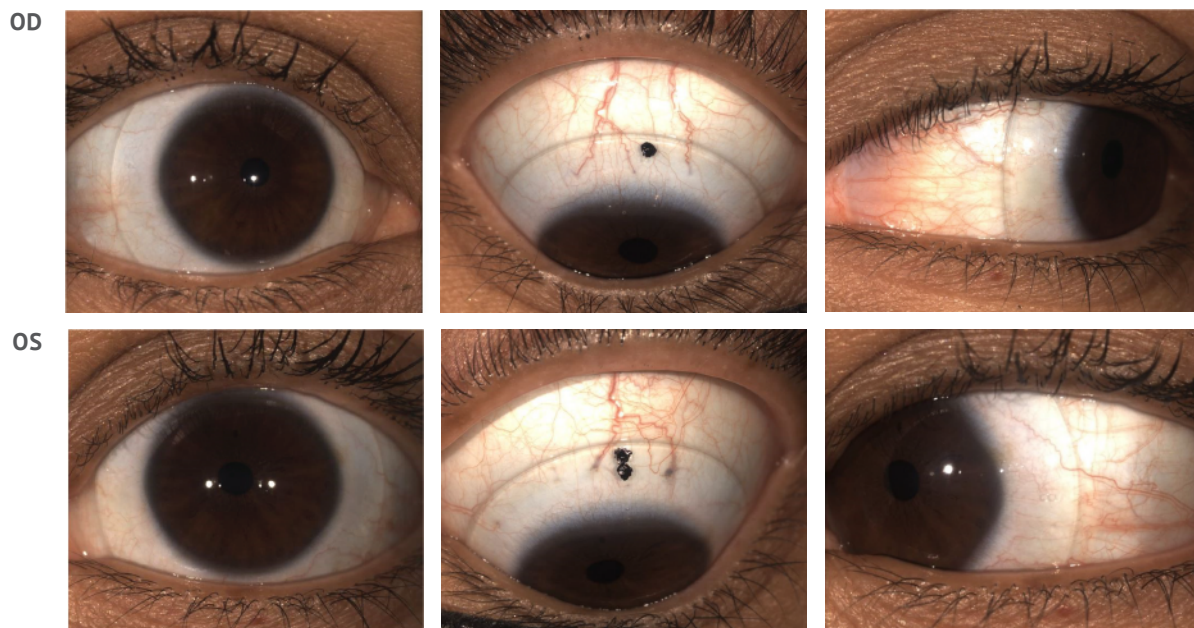
Figure 1 Eye scans with the Eye Surface Profiler

Based on BostonSight guidelines a lens diameter of 18.5mm was chosen. With the DirectConnect™ feature of the ESP the complete scan data is then imported directly into BostonSight's FitConnect® platform to design and ordered the lens, harnessing the power of empirical fitting.

| | |
|-------------------------|---------------|
| Lens ▲ | |
| Supplier | BostonSight ▼ |
| Type | Smart360™ ▼ |
| Diameter | 18.5 ▼ |
| Print | |
| DirectConnect ▲ | |
| BOSTONSIGHT® FitConnect | |

First and Final Lens Fit

The first lens design came out beautifully, with a smooth, comfortable fit. The first lenses ordered were the final lenses, and no adjustments were needed.



Conclusion

Very successful empirical fitting with the Eye Surface Profiler and BostonSight SCLERALS. Patient reports exceptional comfort and relief from dry eye symptoms. She wears the lenses from 5 a.m. to 10 p.m. every day with no symptoms or corneal findings. With her scleral lenses she needs only 2 drops a day of ATs am and pm. She had a lot of fluctuating vision with soft lenses due to dryness but now has all-day comfort and improved vision/stability.