

CASE STUDY

**MALE PATIENT WITH KERATOCONUS
FIT WITH SCLERAL LENSES**

BACKGROUND

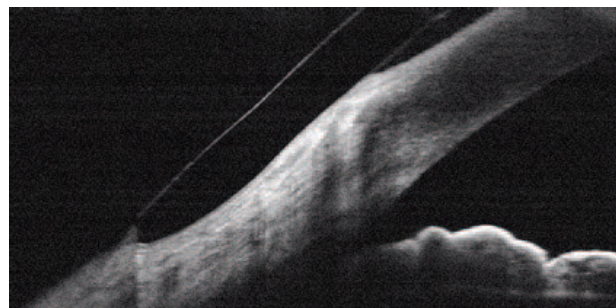
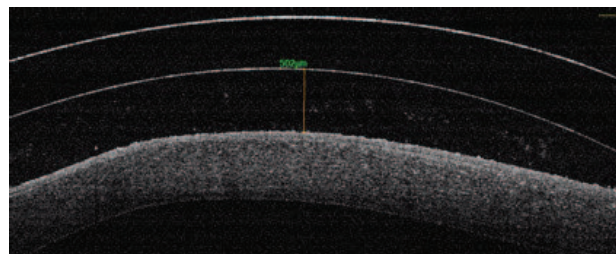
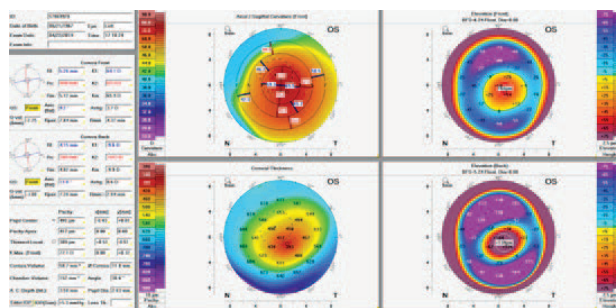
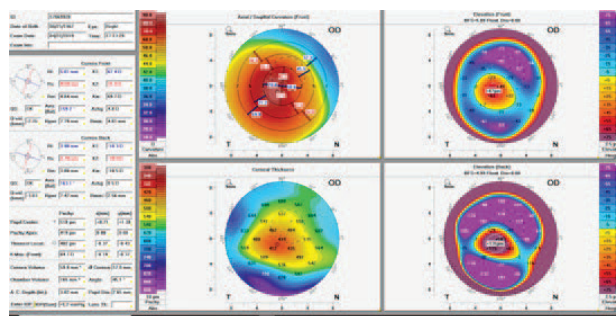
A 51-year-old hispanic male presented with keratoconus. Originally fit with RGP lenses, then fit with scleral lenses two years ago. Patient was unable to obtain full correction with scleral lenses and required spectacles over scleral lenses for best corrected vision.

SCLERAL LENS CONSULTATION

- Entering visual acuity (VA) was OD 20/50+2 and OS 20/30-2 through spectacles over contact lenses
- Rx in the spectacles was OD -1.50 -1.75 x 130 and OS -1.25 -3.50 x 40 with +2.00 add OU
- Average wear time was 5-6 hours per day

ASSESSMENT OF PREVIOUS SCLERAL LENS

- 15.6mm diameter scleral lens
- Wear time at first presentation: ~6 hours
- The lenses were poorly fitting with excessive central vault and tight haptics
- There was severe superficial punctate keratitis (SPK) in both eyes
- Anterior Segment OCT showed boggy epithelium



SCLERAL LENS FITTINGS

The patient was started with an 18.5mm diameter lens. The go-to, quadrant-specific, data-driven trial lens was applied in each eye and allowed to settle for 20 minutes.

OD

- Standard scleral shape
- 2.8mm sag
- 0.25D
- Base curve (BC) 8.0mm
- Front Surface Eccentricity (FSE) 1

OS

- Standard scleral shape
- 2.8mm sag
- 0.25D
- Base curve (BC) 8.0mm
- Front Surface Eccentricity (FSE) 1

Trial Lens Assessment

- Central clearance ~300 μ m in each eye
- VA was 20/20 in each eye with minimal over refraction of OD -0.50D and OS -0.25D
- First pair of lenses were ordered with flattening of the haptics to provide better alignment

RESULTS

The data-driven and evidenced-based nature of BostonSight SCLERAL allowed for an easy fitting process, thus allowing us to pinpoint the final haptic alignment and final prescription after the first pair of lenses ordered. This was due to the built-in, quadrant-specific haptic toricity and scleral shape and the built-in BC and FSE value.

Dispense Visit

- VA was OD 20/25 OS 20/20- with plano over-refraction
- Haptics were aligned in both eyes
- Patient reported great comfort and vision

Follow-up Evaluation

- At follow-up, VA was OD 20/25+ OS 20/20- after 10 hours of wear
- The patient reported good comfort and VA
- He was very happy that he did not have to wear glasses anymore over his scleral lenses, and his wear time doubled with an average of 10-12 hours
- Haptics had good alignment
- Three weeks later, patient reported excellent comfort and vision
- Average wear time was still 12 hours
- Entering VA was 20/20- OD and OS with plano over refraction
- SPK had resolved

