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# Twop Case Study

## **SCLERAL LENSES FOR CORNEAL TRANSPLANTS**



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# Patient History

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**CHIEF COMPLAINTS:** 46-year-old female subject, wearing piggyback on corneal, transplant on both eyes.

**OCULAR HISTORY:** The patient suffers from keratoconus from the age of 15; she submitted corneal transplant surgery on both eyes in 1996, her right eye was operated on a second time in 2013. Vision is poor, under 20/100-200 with glasses on both eyes.

**PAST MEDICAL HISTORY:** Has been suffering from keratoconus since the age of 15.

**FAMILY HISTORY:** No one in the family suffers from keratoconus.



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# Contact lens History

## VISUAL ACUITY (without CL):

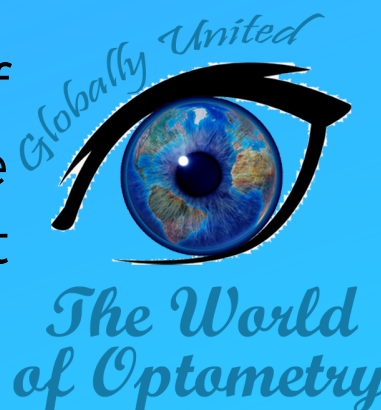
- RE: -4,00 / -4,00 ax 40° (vision achieved 20/100)
- LE: -4,00 / -5,00 ax 110° (vision achieved < 20/200)

## VISUAL ACUITY AND TYPE OF PREVIOUS CL:

- RE: -1,25 cyl: -5,50 ax 40° (vision achieved 20/50)
- LE: -4,50 cyl: -3,00 ax 110° (vision achieved 20/40)

- Patient has been using **Piggyback CL** since 2013 to correct defects, but she hadn't used the right lens for more than a year as it was not comfortable during wearing, while on the left lens she did not complain of any particular inconvenience.

- C/o **Some discomfort** due to the management of the two different lenses materials (the soft and the rigid part of the piggyback require two different types of preservation).





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# Clinical Findings

## TRIAL SET LENSES APPLIED:

**RE:** CUSTOM STABLE ELITE - **25E** (DIA: 15.80 BC: 7.18)

**LE:** CUSTOM STABLE ELITE - **15E** (DIA: 15.80 BC: 6.89)

## OVER REFRACTION:

**RE:** -1,00 cyl: -1,00 ax 135° (vision achieved < 20/25)

**LE:** -2.00 cyl: -1,50 ax 60° (vision achieved 20/25)

**NOTE:** Comfort level is excellent immediately, unlike its previous lenses. Slit lamp examination shows good.



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# Clinical Findings

## SLIT LAMP EXAMINATION OF CL:

- The lifting of the lens from the cornea is analyzed in the optical section:
- RE CL: too close by about 100 microns to the norm
- LE CL: Ideal lifting

## LINE FOR EVALUATING THE ROTATION OF THE TORIC LENS:

- Being Custom Stable Elite lenses (toric), evaluate with the **Optical section by positioning the reference notch** for the correction of astigmatism. This is achieved by aligning the light of the section to the cleat, then read the degrees of inclination:
- RE CL: line positioned at 100 °
- LE CL: line positioned at 80 °



DRAG TO THE SIDE  
DRAG TO THE SIDE

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# Newly Inserted Scleral Lens

SLIT LAMP WITH OPTICAL SECTION:





# Fitting Assessment <sup>#TwoCaseStudy</sup>

## FLUORESCEIN EXAMINATION:

- Instilled the fluorescein & wait for 15 minutes to check the correct support of the lens on the sclera, evaluating the possible entry of (colored) tear under the lens.
- The two situations were:
  - **RE CL: Correct**
  - **LE CL: Slightly raised in the periphery about 30 microns.**

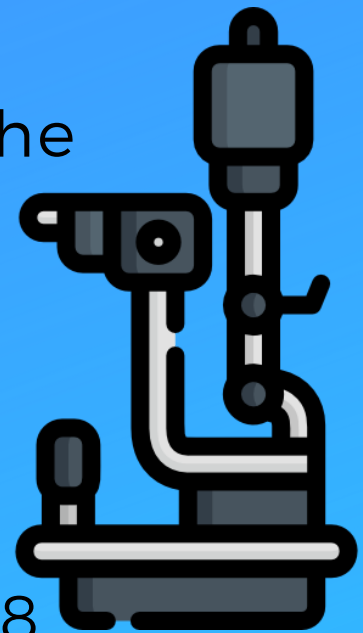


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# CL Examination & Lens Ordered

## SLIT LAMP EXAMINATION UPON REMOVAL CL WITH FLUORESCEIN:

- RE: there is neither an excessive imprint on the sclera nor alterations on the cornea
- LE: there is neither an excessive imprint on the sclera nor alterations on the cornea



## FINAL LENS PARAMETERS:

- RE CL: Custom Stable Elite, diam: 15,80, BC: 7.18
- Power: -7,00 cyl: -1,00 ax 25°; LCZ: -1,0, SLZ: 0
- LE CL: Custom Stable Elite, diam: 15,80, BC: 7.18
- Power: -10,00 cyl: -1,50 ax 160°; LCZ: 0, SLZ: -1/-1



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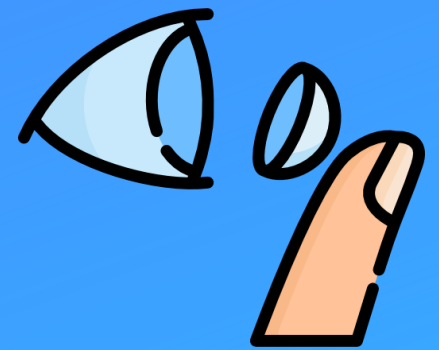
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# Management & Treatment

- The patient is very satisfied and happy both for the comfort and for the final vision obtained.
- The lenses will be properly managed with adequate maintenance and checked with a follow-up every 3 months, the replacement of them is annual.
- As in many other complicated cases, scleral contact lenses are an excellent solution. These guarantee the best optical quality typical of rigid contact lenses, associated with the excellent comfort typical of soft ones.



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