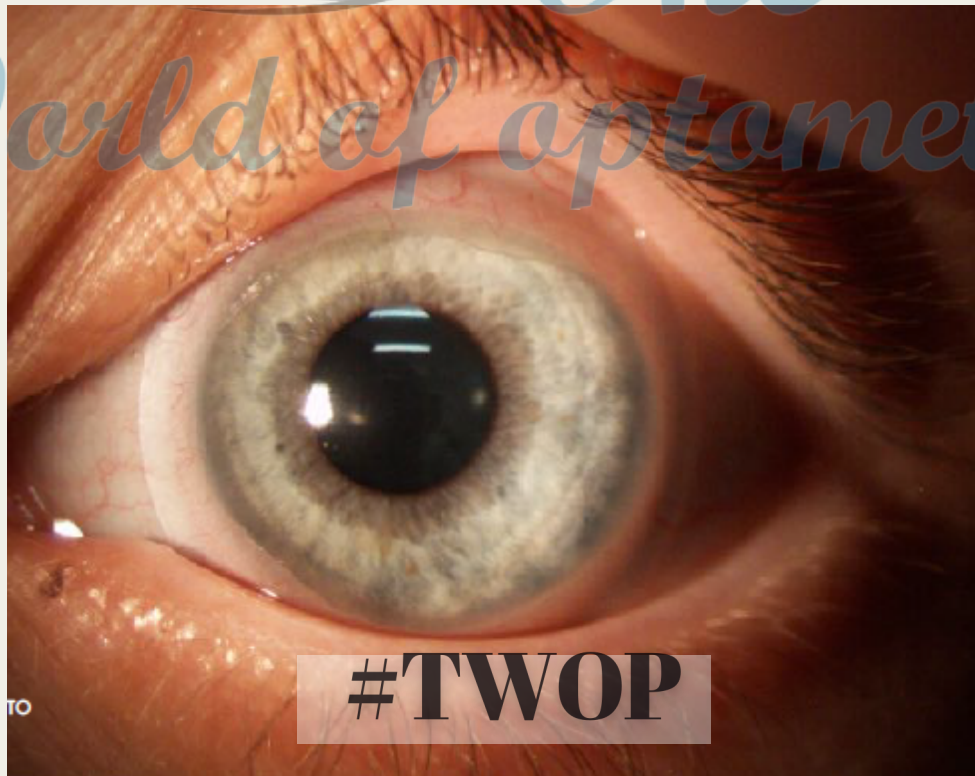




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Twop Case Study

SCLERAL LENSES FOR KERATOCONUS



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Patient History



CHIEF COMPLAINTS: 21 year old female with keratoconus, has great difficulty in removing hybrid CL, risking getting hurt every time

OCULAR HISTORY: Keratoconus since age 14; Poor Vision: under 20/100-200 with glasses on both eyes.

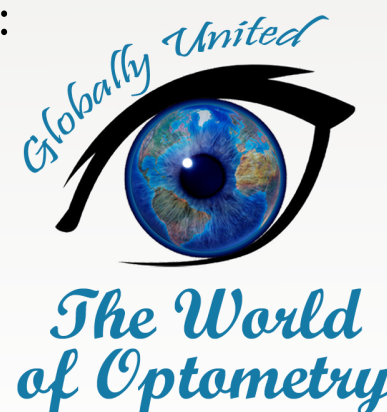
PAST MEDICAL HISTORY: Has been suffering from keratoconus since age 14.

FAMILY HISTORY: Nil for keratoconus.

VISUAL ACUITY: (without CL or glasses):

- RE: -1.50 / -4.50 @ 60° (20/200)

- LE: -1.00 / -3.00 @ 110° (< 20/200)

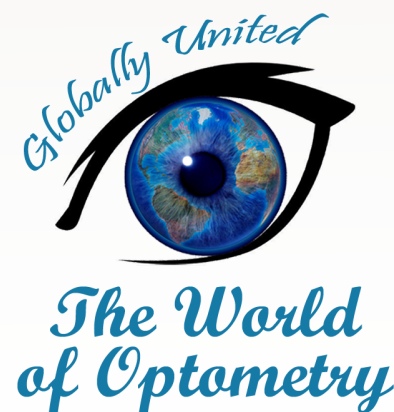
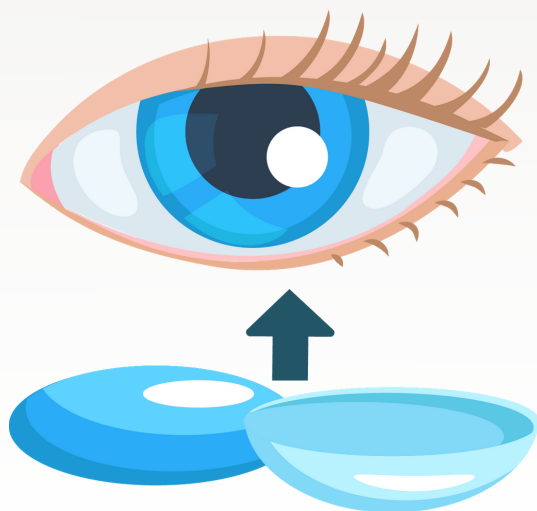


Contact Lens History

VISUAL ACUITY AND TYPE OF PREVIOUS CL: :

- RE: 20/40
- LE: 20/40

The girl had been using Synergeyes Ultrahealth hybrid lenses for almost a year, her vision was not exceptional and she always had great difficulty in removing them, risking getting hurt every time. So she decided to opt for scleral lenses, which would have guaranteed the comfort of the soft ones, associated with the optical quality of the rigid gas permeable lenses.



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Clinical Findings With Contact Lens

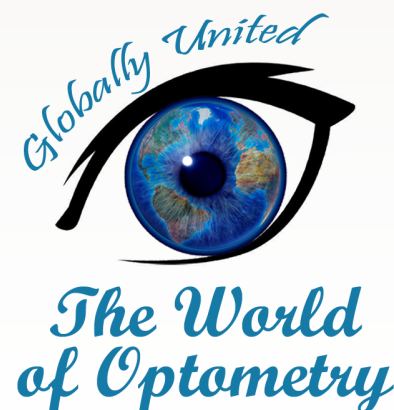
TRIAL SET LENSES APPLIED:

- **RECL:** CUSTOM STABLE ELITE - 35E (DIAMETER: 15.80 BC: 7.50)
- **LECL:** CUSTOM STABLE ELITE - 25E (DIAMETER: 15.80 BC: 7,18)

OVER REFRACTION:

- **RE:** + 3,75 cyl: -0,25 ax 170° (vision achieved 20/20)
- **LE:** -+3,50 cyl: -0,25 ax 30° (vision achieved 20/20)

NOTE:: The comfort is already excellent immediately and much safer removal than with previous lenses. In the slit lamp everything is ok so far.



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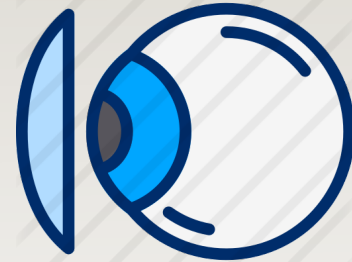


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Clinical Findings

SLIT LAMP EXAMINATION OF CL: the lifting of the lens from the cornea is analyzed in optical section:

- **RECL:** ideal lifting
- **LECL:** ideal lifting



Evaluation of toricity for the compensation of astigmatism: in overrefraction, the addition of a cylinder to correct astigmatism did not improve vision. So we chose to correct only the spherical component as it was sufficient and an addition of cylinder was unnecessary.

Both lenses are well centered on eyes



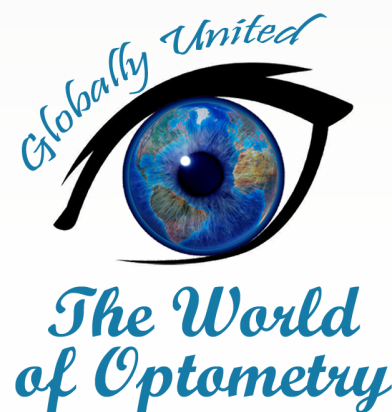
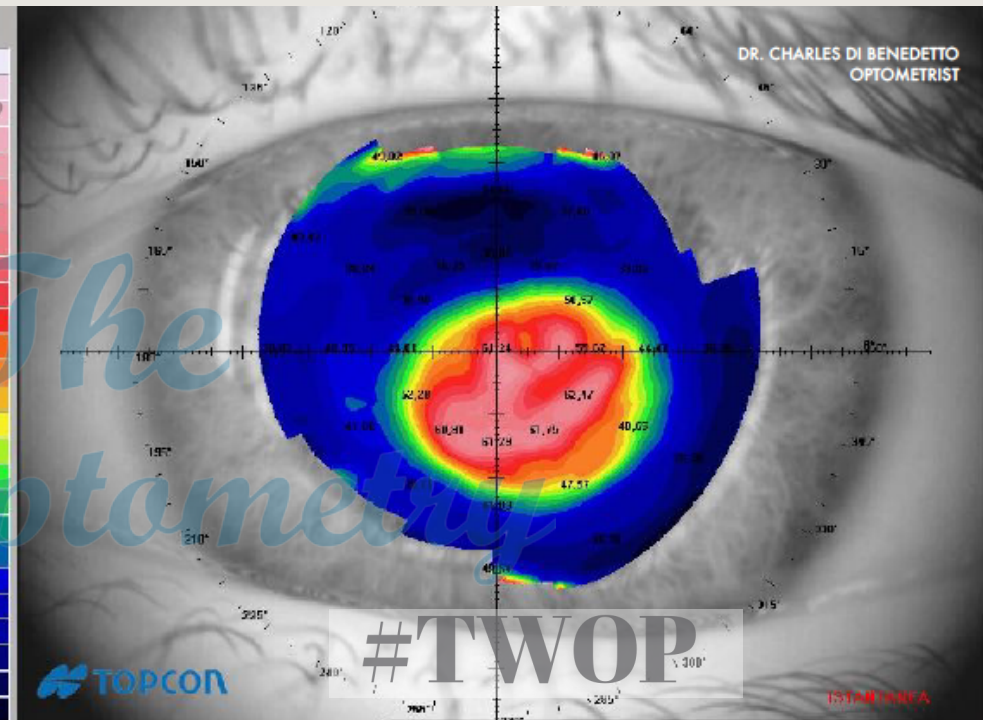
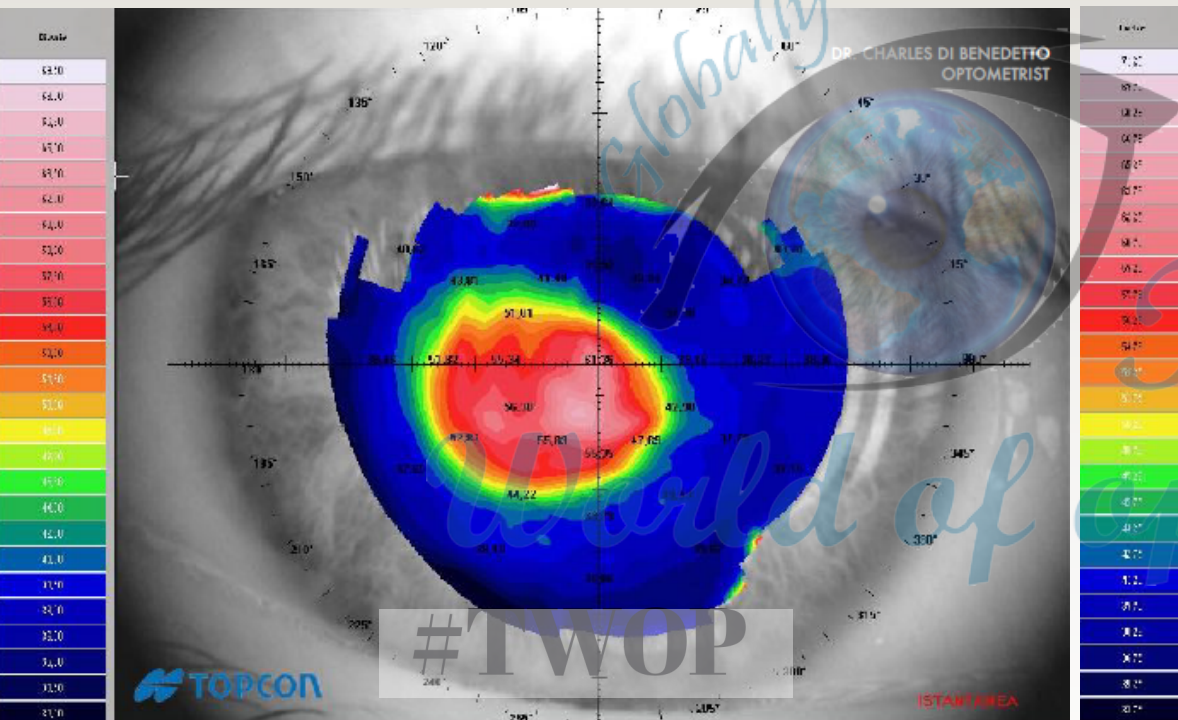
DRAG TO THE SIDE
DRAG TO THE SIDE

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Topographic MAP

Topographic of The Left Eye Before Treatment

Topographic of The Left Eye After Treatment



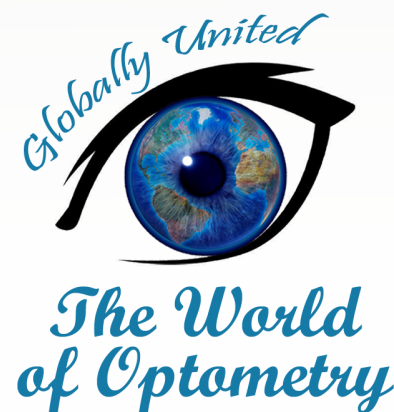
DRAG TO THE SIDE
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Scleral Lens Seen In a Slit Lamp With Optical Section

Topographic MAP 3D of The Left Eye Before Treatment

Topographic MAP 3D of The Left Eye After Treatment



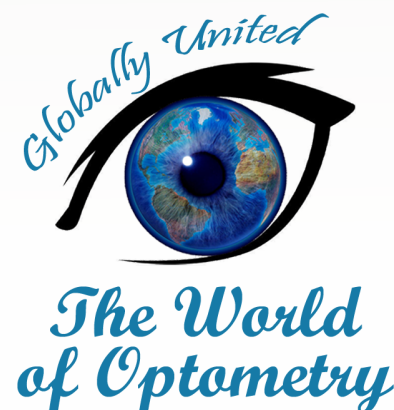
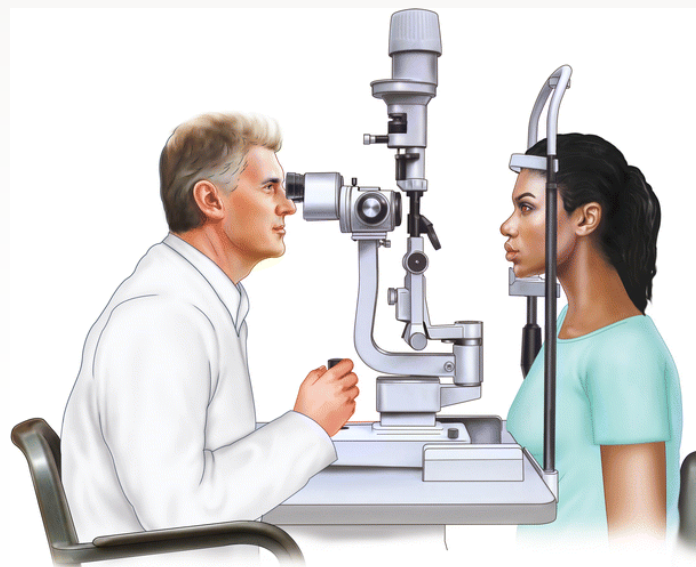
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Fitting Assessment

FLUORESCEIN EXAMINATION: instilled the fluorescein, we wait about 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:

- **RECL:** almost correct rear back surface of the lens slightly too far from the corneal surface, about 100 microns
- **LECL:** correct



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CL EXAMINATION



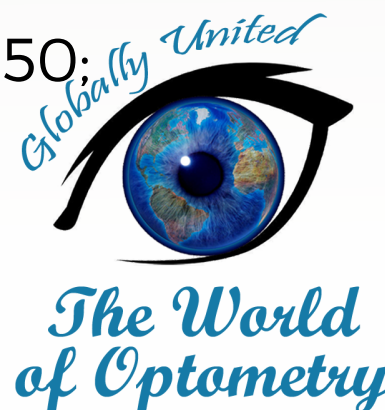
SLIT LAMP EXAMINATION UPON REMOVAL CL WITH FLUORESCEIN:

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

FINAL LENS PARAMETERS:

- **RECL:** Custom Stable Elite, diam: 15,80, BC: 7.50 power: -0,50; LCZ: +1,0, SLZ: 0

LECL: Custom Stable Elite, diam: 15,80, BC: 7.18 power: -2,50; LCZ: 0, SLZ: 0



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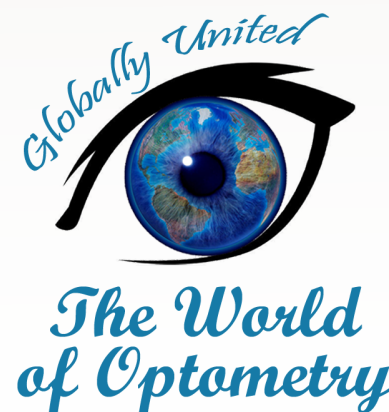
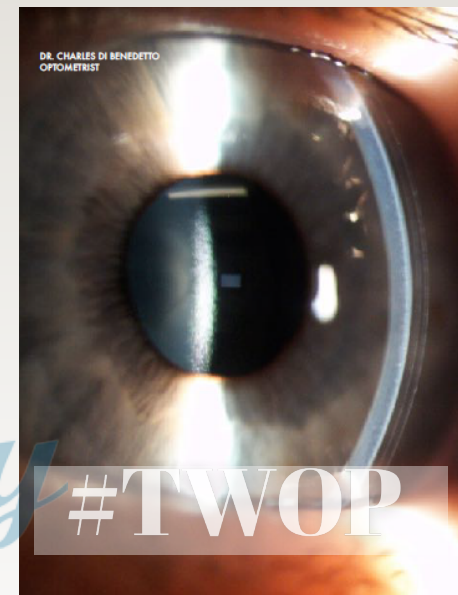
Management & Treatment

This patient was satisfied and happy both for comfort and best corrected vision.

The Lenses will be properly manage with adequate maintenance with a follow up visit every 3 months while replacement is annual.

In this case Scleral lenses hvae eliminated the risk of inflammation and Conjunctival problems as the removal of these lenses is less traumatic and easily manageable for the patient compared to his previous Contact lenses.

In many other complicated cases Scleral lenses are an excellent solution, guarantee the best optical quality like Rigid gas permeable contact lenses and optimum comfort typical of soft contact lenses.



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