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Twop Case Study

**ORTHOKERATOLOGY FOR
HIGH MYOPIA**

#TWOP



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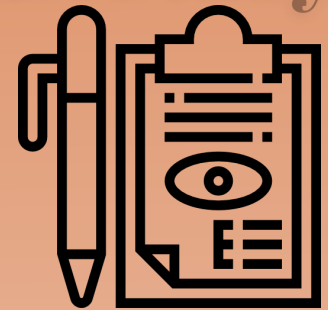
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Patient History



CHIEF COMPLAINTS: 27-year-old female subject, wearing soft contact lenses or glasses on both eyes.

OCULAR HISTORY: The patient suffer from myopia from the age of 8; the current myopia is very high, associated with astigmatism.

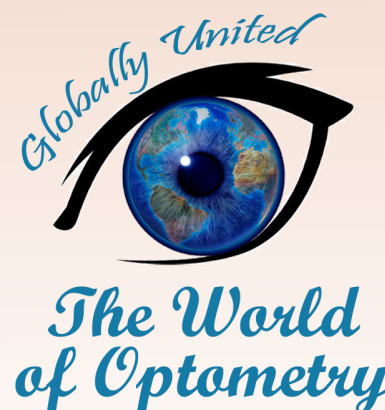
PAST MEDICAL HISTORY: The girl in the past and in the present state does not suffer from other eye problems besides her myopia, but this continues to get worse.

FAMILY HISTORY: the mother is very short-sighted, the father and the other members of the family are not.

VISUAL ACUITY (without CL or glasses):

RE: -7.50 / -1.00 ax 10°

LE: -7.50 / -2.00 ax 110°



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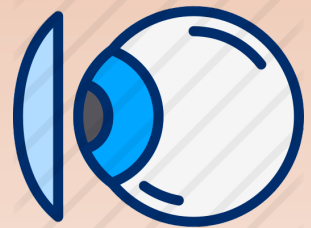
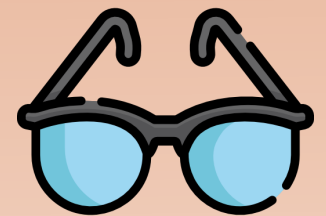
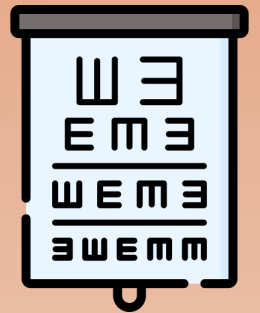
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Contact Lens History

VISUAL ACUITY AND TYPE OF PREVIOUS SOFT CL

- RE -6.50 cyl: -0.75 ax 10°
(vision achieved 20/20)
- LE: -6.50 cyl: -1.75 ax 10°
(vision achieved $< 20/20$)
- The girl was abusing too much of the monthly soft contact lenses, as the **glasses** are very heavy on the nose and therefore not well accepted.
- She also realized that vision was almost natural when wearing **contact lenses**, while with glasses the vision was distorted and altered.



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Clinical Findings

We decided to approach Ortho-k lenses

TRIAL SET LENSES APPLIED:

RECL: CONTEX OK 42.50/-4.00 (.5E) DIAMETER: 10.60, Boston XO

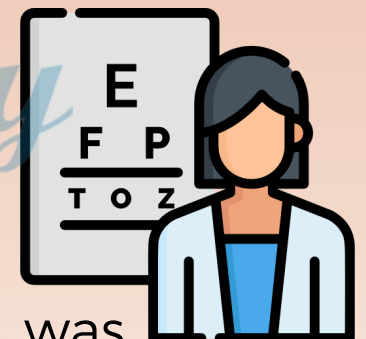
LECL: CONTEX OK 41.50/-6.00 (.5E) DIAMETER: 10.60, Boston XO

OVER REFRACTION:

RE: -3.25 (vision achieved with lens applied 20/20)

LE: -1.75 (vision achieved with lens applied 20/20)

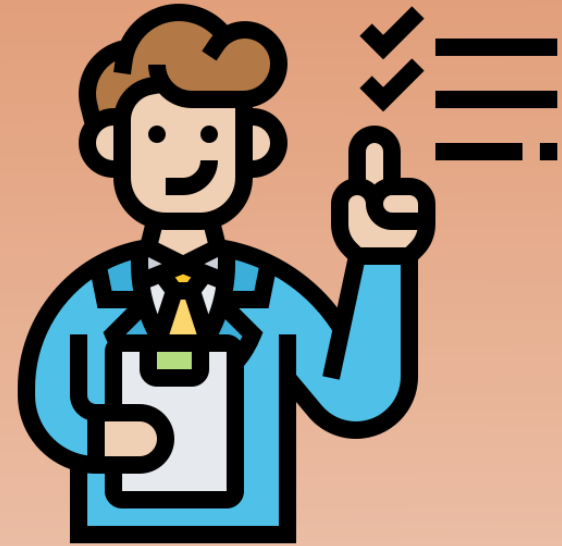
NOTE: the choice of **Orthokeratological Contact Lenses** was also chosen to **control myopic progression**, which continued to increase even in recent years.



DRAG TO THE SIDE
DRAG TO THE SIDE

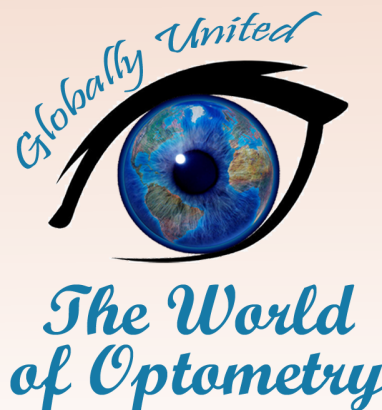
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Diagnosis



Globally United

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Clinical Findings

SLIT LAMP EXAMINATION OF CL

After instilling the **fluorescein**, we waited a couple of minutes and observe the lenses:

RECL: perfect support on the cornea

LECL: perfect support on the cornea

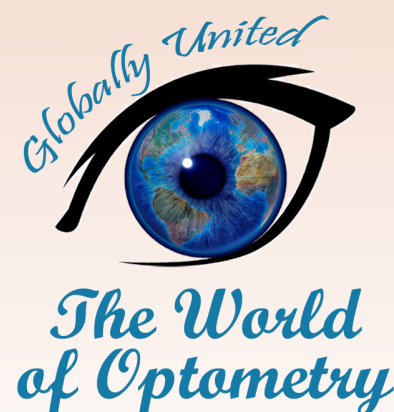
The lenses are well centered on both eyes.

After teaching the girl how to handle contact lenses, we also tried them for one night.

Photo of one the
Orthok Lenses Applied



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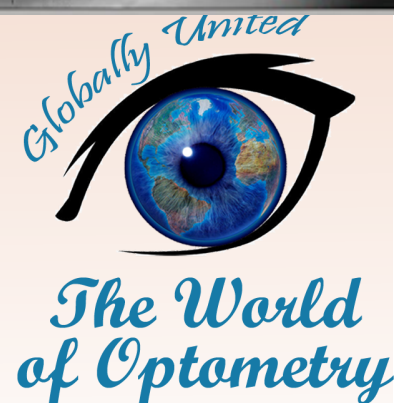
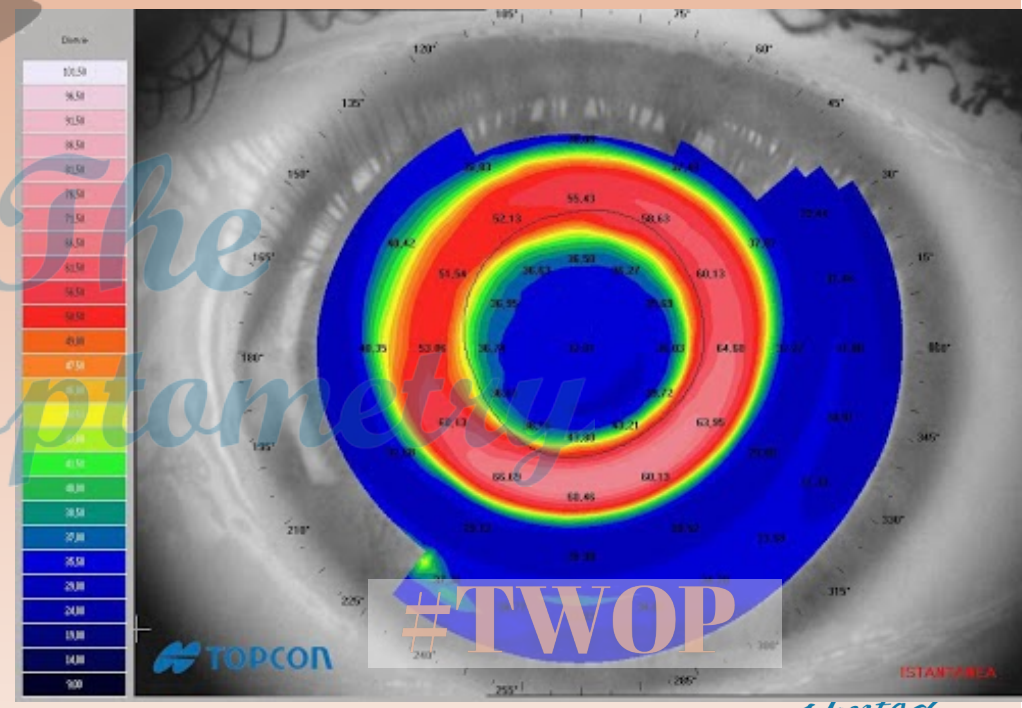
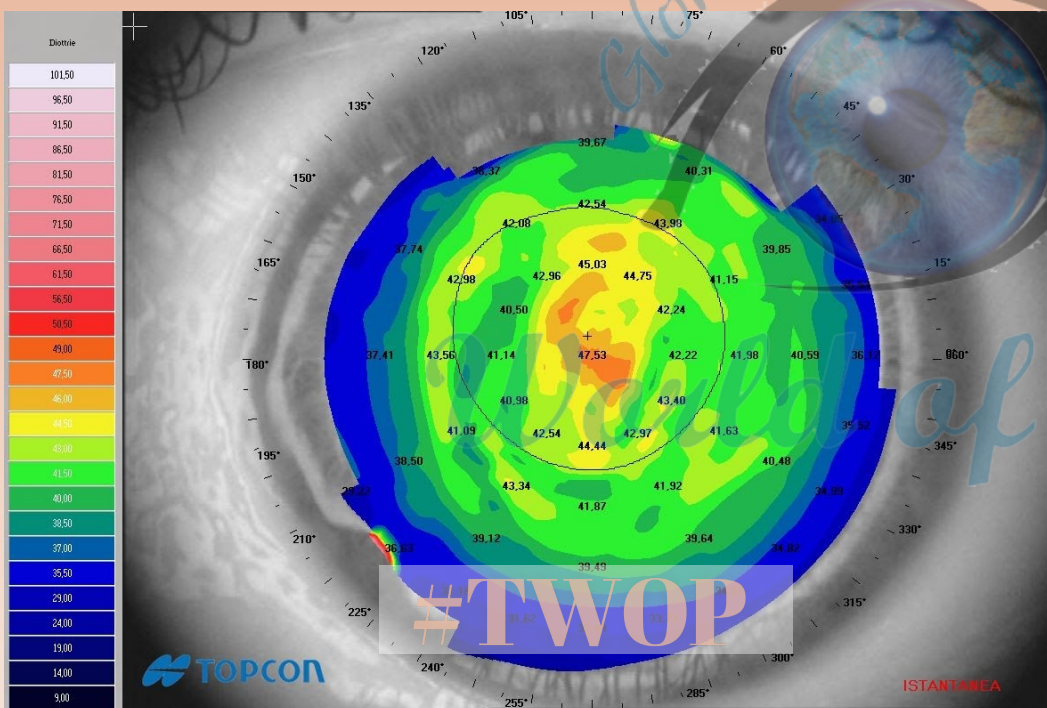
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Topographic MAP

Topographic of The Left Eye Before Treatment

Topographic of The Left Eye After Treatment



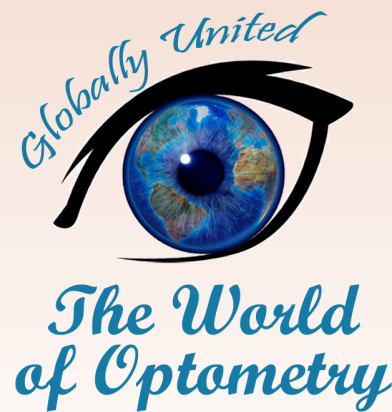
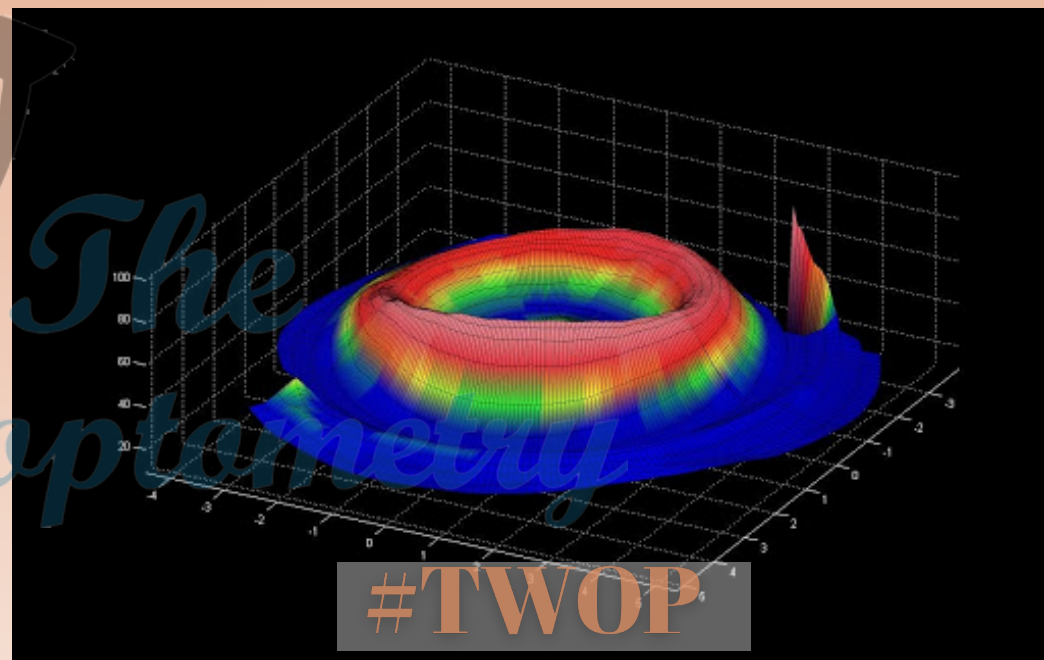
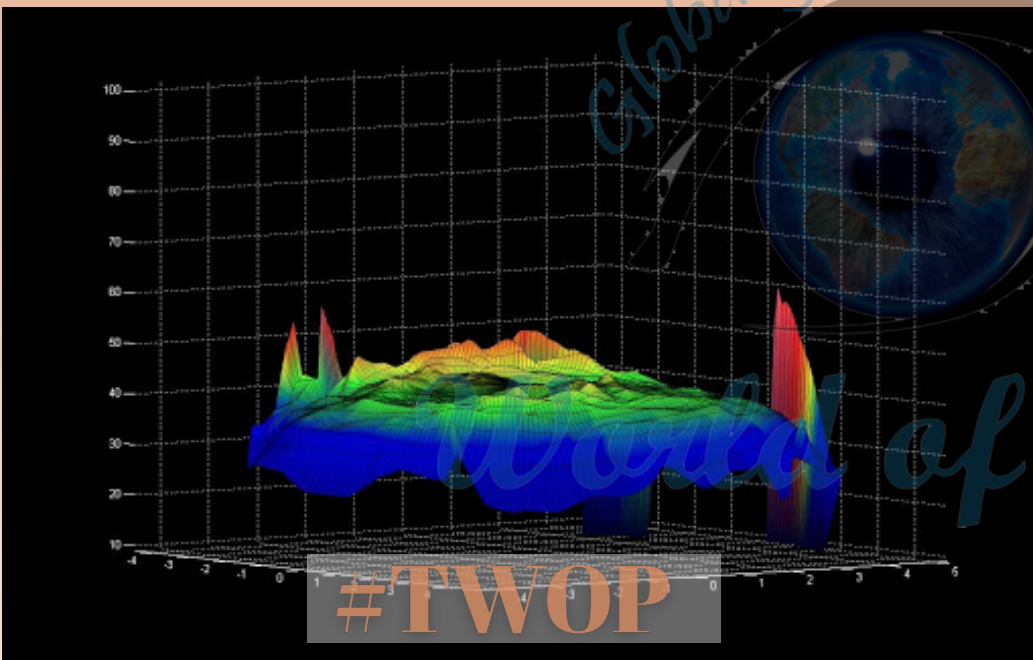
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Topographic MAP 3D

Topographic MAP 3D of The
Left Eye Before Treatment

Topographic MAP 3D of The
Left Eye After Treatment



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Examination After The Night

- As we can see from the **topographies** (exposed there are only those relating to the left eye, the situation of the right eye are very similar). The two situations were:



- The myopic eye was initially more curved, in fact the **topography before** the treatment showed warmer colors (red area, and therefore more curved point of the corneal surface) in the center, and colder colors (flatter areas) in the periphery. **After** the night, the lens left a circular imprint that defines the success of the treatment.



- The treatment is also observed in the **3D maps; after the night** in fact, we see the imprint released by the lens on the corneal surface on the cornea at 360 °. The image looks like a volcano crater: flat area in the center, medium-peripheral ring-curve and flat in the periphery.

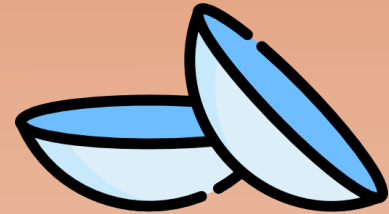


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Examination After The Night

SLIT LAMP EXAMINATION:

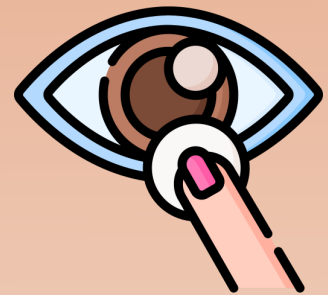
Both eyes were clear, with no signs of epithelial distress.



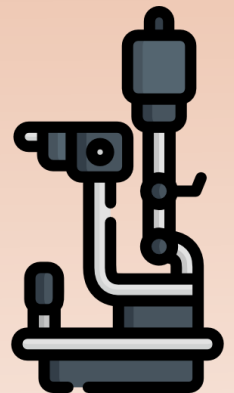
VISUS AFTER ONE NIGHT OF TREATMENT

RE: - 4.50 / - 0.50 ax 15°

LE: - 4.75 / - 1.00 ax 100°



FINAL LENS ORDERED: Since myopia is so high, We decided to order Contex lenses in "EX" geometry for high myopia. Then recalculating the over-refraction, base curve and topographies, the final lenses chosen were:



FINAL LENS PARAMETERS:

RECL: CONTEX OK 42.00/-8.00 (.5EX) DIAMETER:10.60, Boston XO

LECL: CONTEX OK 41.00/-8.50 (.5EX) DIAMETER: 10.60, Boston XO



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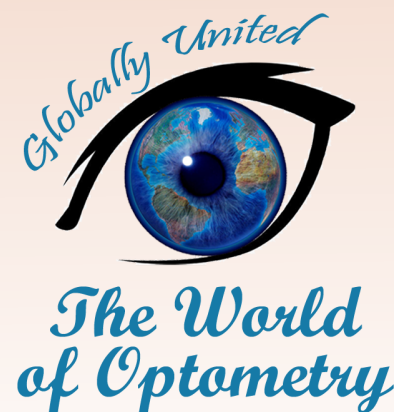
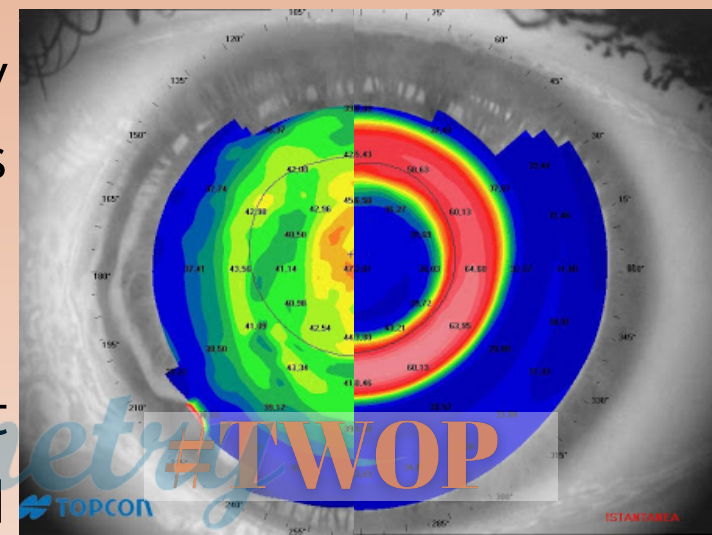


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Management and Treatment

- After 8 Months of treatment, the girl is satisfied. The Vision During the day is ideal: 20/20!
- Periodic checks are carried out regularly every **3 months**. Lens Maintenance is well managed and The Eye Is Healthy.
- **Orthokeratology** is an excellent alternative to Classic Glasses and Contact Lenses; In this case it also represented an alternative to surgery, As the girl didn't want to undergo this and, due to the High Myopia, The successful of the surgery wasn't guaranteed given the High Myopia.

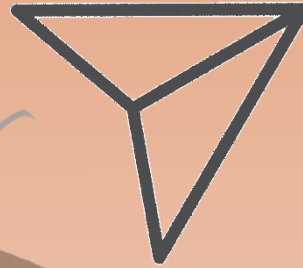




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