
ICD TORIC 16.5 CASE REPORT

OVAL KERATOCONUS



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ICD TORIC 16.5 For Oval Keratoconus

23 Y/O patient

Female

In general good health , does not take medication.

The patient does not use any spectacles or contact lenses.

The keratoconus was diagnosed 4 years ago with Oval keratoconus of both eyes, more severe in OS, but did not receive any specific treatment.

Rx OD: Pl-2.75x 50 VA 6/8.5

Rx OS: +1.00-3.00x70 VA 6/30

K READING:

OD: 7.28 mm @ 53° / 6.64 mm @ 143°

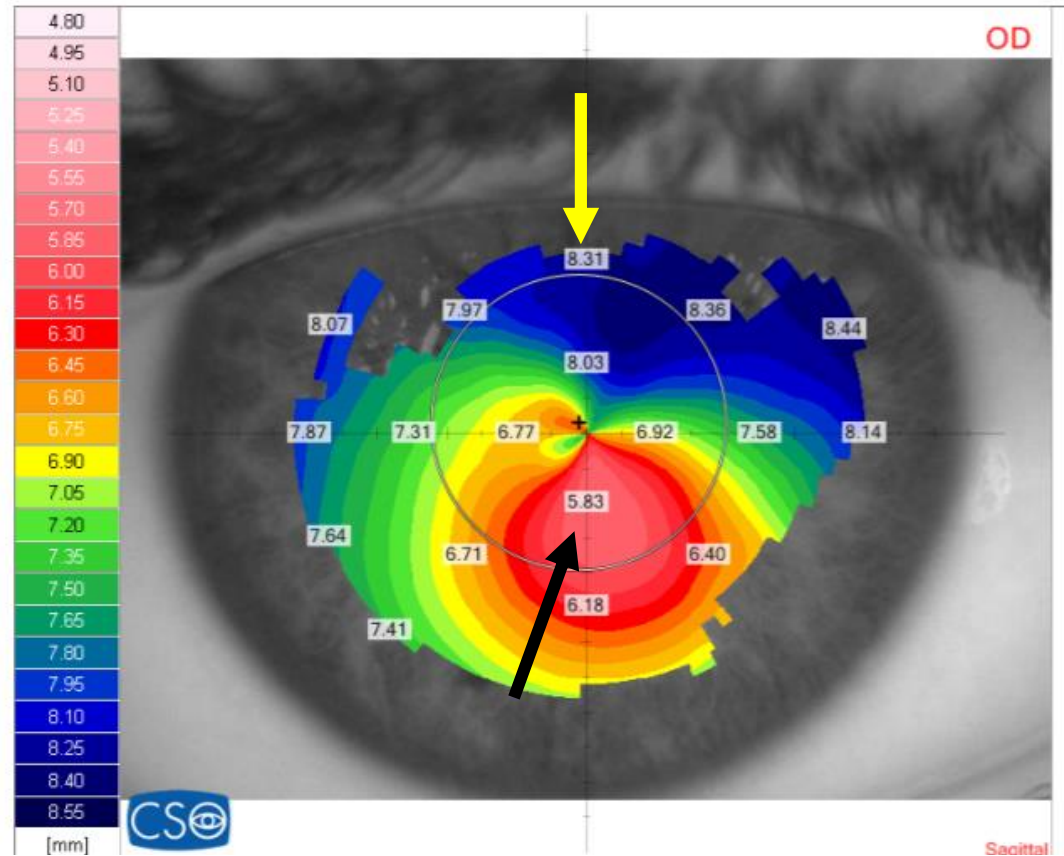
OS: 6.89 mm @ 131° / 6.13 mm @ 41°



OD- Topography

KPI = 100% PPI = 0%
Keratoconus
Morphology

ICDTM 16.5
IRREGULAR CORNEAL DESIGN

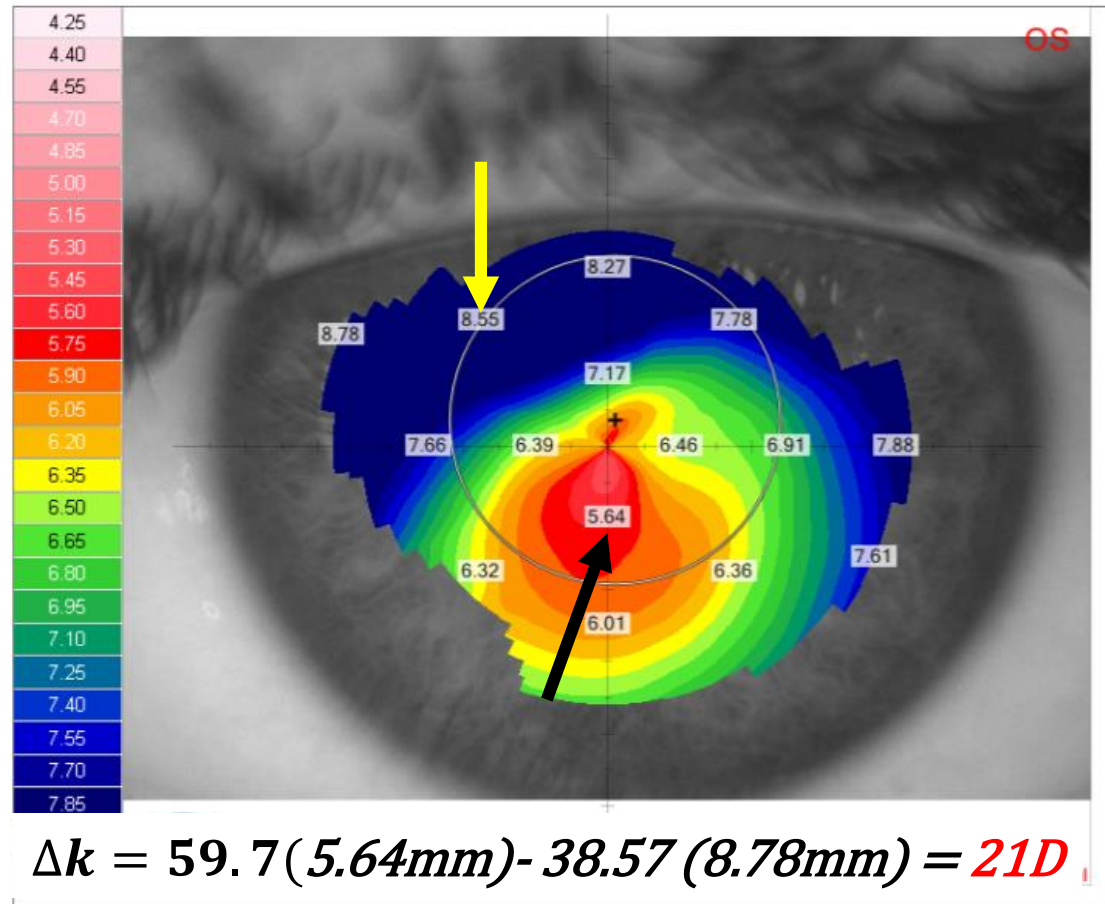
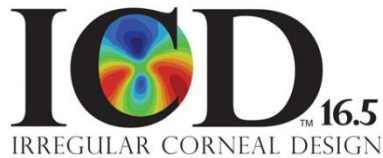


$$\Delta k = 57.69(5.83\text{mm}) - 40.66(8.31\text{mm}) = 17D$$

The difference between the steep K and the flat K is around 17D. There is a big gap in front of the visual axis which can dramatically affect vision quality. Good candidate for the ICD Semi Scleral.

OS- Topography

KPI = 100% PPI = 0%
Keratoconus Morphology



The difference in OS is greater around 21D, and this can explain the severe vision impairment in the left eye. Good candidate for the ICD Semi Scleral.

ICD 16.5 Fitting

Selecting the initial lens using the table:

When we use the table, first of all we need to identify the corneal condition.

In our case the patient has Oval keratoconus, we chose Sag 4500μ (green arrow).

When we inserted the lens we saw apical touch in the center so we changed the Sag to 4800μ (red arrow) = $4500\mu + 300\mu$ clearance

Identify the Corneal Condition	Based on the Corneal Condition, Select the Initial ICD™ Trial Lens with this Sag	Sagittal Depth @ 15mm
Normal Depth Eyes <ul style="list-style-type: none"> - Normal Shapes - Median Flat K-Reading - Ocular Surface Disease - Post Refractive Surgery 	Start with the 4200μ Sag	3900 μ 4000 4100 4200 4300
Median Depth Eyes <ul style="list-style-type: none"> - Keratoconus - Pellucid Marginal Degeneration - Corneal Transplants (low depth) 	Start with the 4500μ Sag	4400 4500 4600 4700
High Depth Eyes <ul style="list-style-type: none"> - Corneal Transplants (high depth) 	Start with the 4800μ Sag	4800 4900
Extreme Depth Eyes <ul style="list-style-type: none"> - Bulging Corneal Transplants - Kerato-globus 	Select Only In Extreme Depth Cases	5100 5300 5600

Toric Periphery Design

In many cases, selecting toric periphery lenses improves the fitting.

The reason is that most of the scleras are toric.

Selecting a lens with toric periphery design has the following advantages:

- Better stability
- Better centration
- Improved comfort
- Ability to prescribe front toric correction.



Fitting Procedure

Our initial lens was ICD 16.5 SPHERE 4500 μ as recommended in the manufacturer's fitting table.

The fluorescein pattern showed central touch.

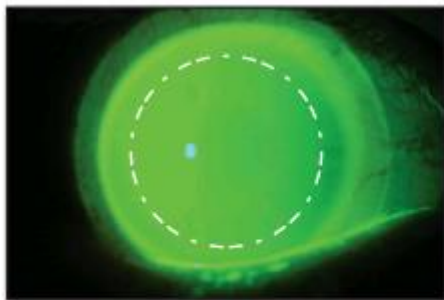
The second lens was 4800 μ but it didn't have a good periphery pattern, we then changed the lenses to toric periphery with the same Sag.

The fluorescein pattern looked better.

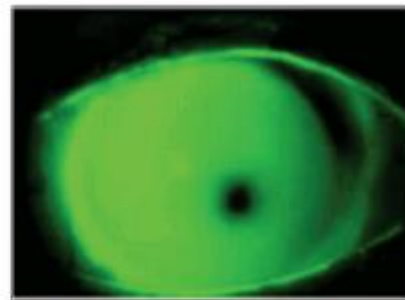
LENSES PARAMETERS ORDER:

OD: ICD TORIC 16.5/ 4800/ -8.50/SLZ-1/ LCZ +3 VA 6/6

OS: ICD TORIC 16.5/ 4800/-9.00/ SLZ -1/LCZ +3 VA 6/6

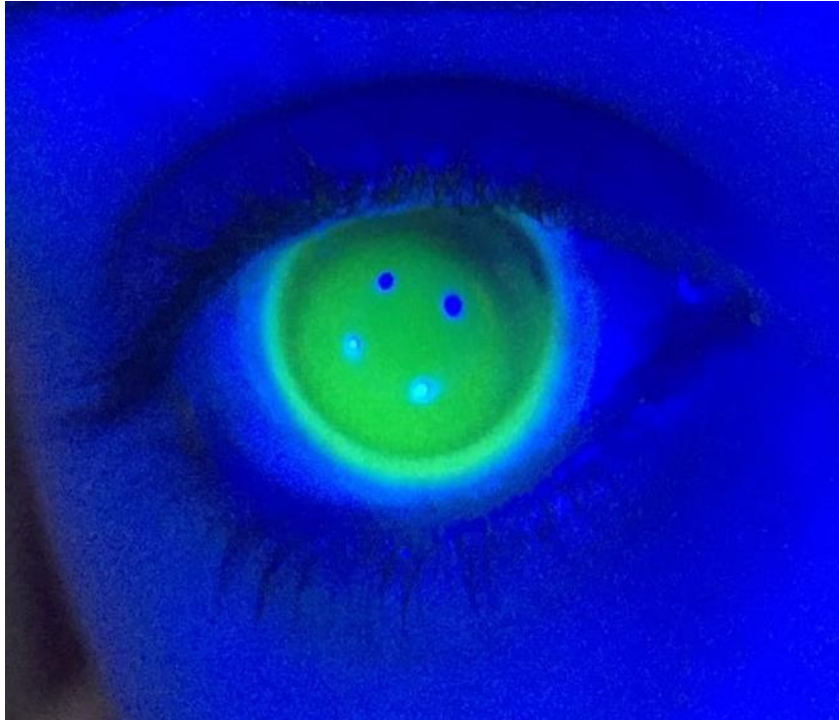


Acceptable Initial Appearance



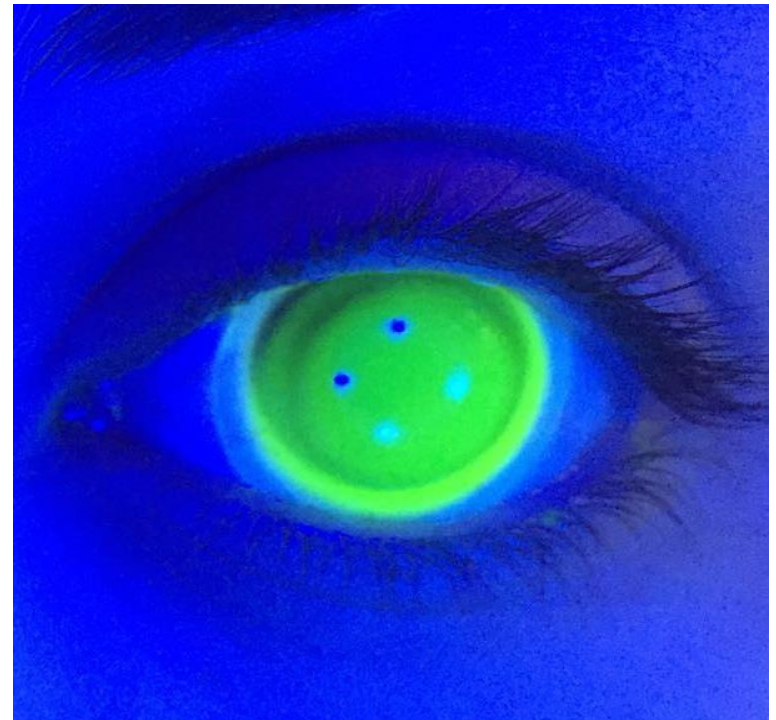
Unacceptable corneal touch
Try on the next deeper lens

Fluorescein pattern



OD

OS



A good clearance can be seen in the center and periphery.

The dots are a reflection from the UV lamp. It is a good way to take a picture with magnification.

UV LAMP

UV lamp - (Burton Lamp)

An effective tool for contact lenses fitting, especially for scleral lenses.

It enables first evaluation of fitting and shows the fluorescein pattern with UV light or a white light with magnification.

The UV lamp is a portable aide for the practitioner, shortening contact lens fitting procedure time.

Side view

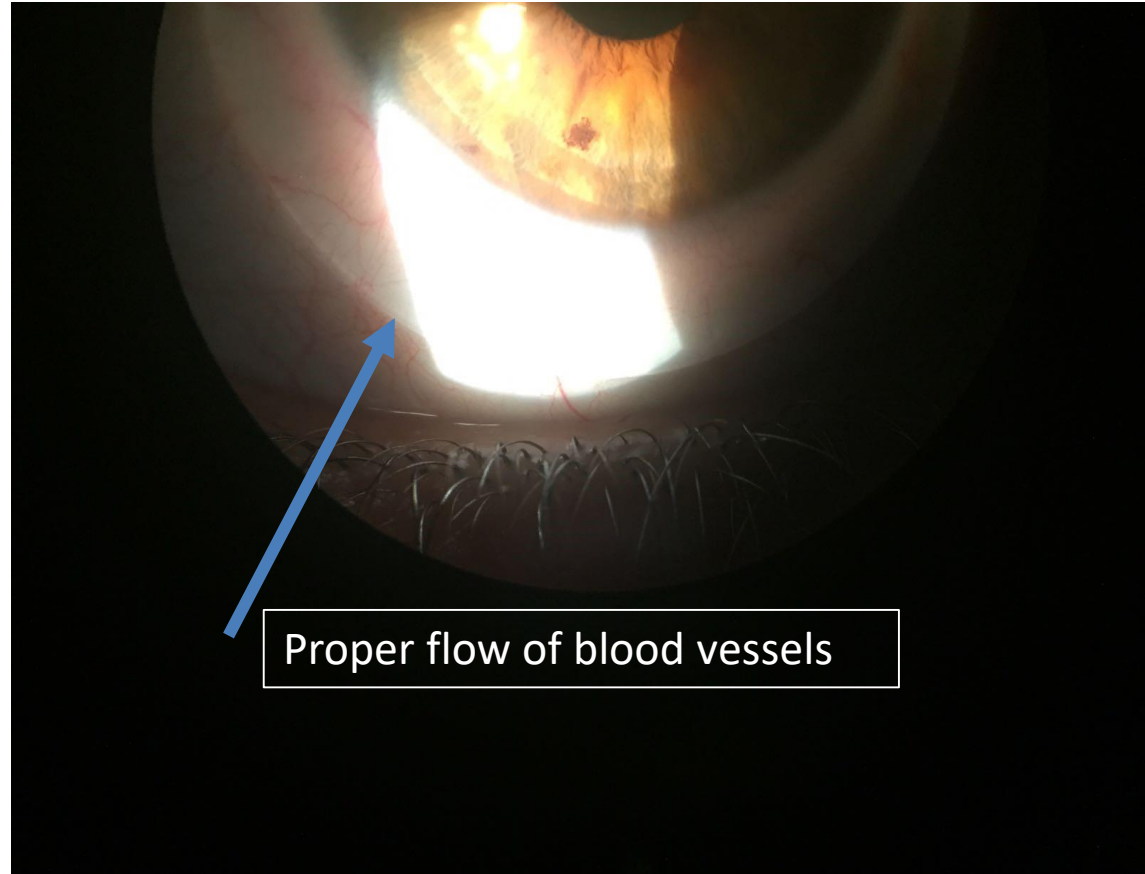


Top view



(OS) SLZ - SLIT LAMP

ICD^{16.5}
IRREGULAR CORNEAL DESIGN



Results and Conclusions

The patient feels very happy and comfortable with her new pair of contact lenses. She wears the lenses approximately 10 hours a day.

ICD Semi Scleral lenses provided a good solution for irregular corneas, especially with significant asymmetry that can be more challenging for special corneal GP lenses.

ICD Toric has many advantages such as centration, comfort, stabilization and optimal fitting for patients with toric scleras.

It can be prescribed with front toric prescription.

The results are better vision, comfortable wear for many hours a day and improved quality of life.

