



CASE REPORT

DR. ALEX GIBBERMAN
20/20 EYECARE
LOVELAND, OH

ADVANCED KERATOCONOUS CORNEAL SCARING

MAXIM 3D

EAGLET ESP

N.H. a 28-year-old Caucasian male
Occupation warehouse worker

- Severe keratoconus
- Presented for a scleral lens fitting to obtain better vision and comfort with new technology

Ocular history

- s/p trauma to right eye as a child mild scarring OD. Hit in the eye as a child with a toy
- wearing 4-5-year-old scleral lenses (unsure of company/brand)

current issues with scleral lenses: Vision has decreased. Comfort is not as good. Mild to moderate redness after daytime use

No history of corneal GP lens wear

Vision with current scleral lenses

- OD 20/60-
- OS 20/25-

Discussed the option of custom scleral lenses

- Goal to improve vision and comfort with scleral lenses

Pertinent Medical History

- Takes omeprazole for heartburn.
- No known family history of keratoconus or other ocular pathology.

BCVA with refraction (unable to get even remotely reliable refraction in either eye)

OD Finger counting at x 2M (plano)

OS 20/400 (plano)

OD 56.25/73.00

OS 60.00/68.75

Pachymetry

OD 423um

OS 425um

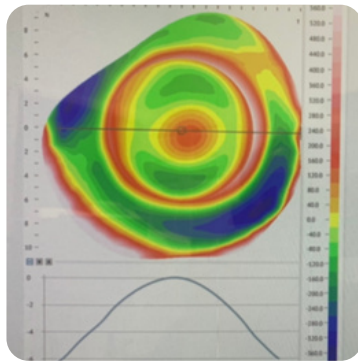
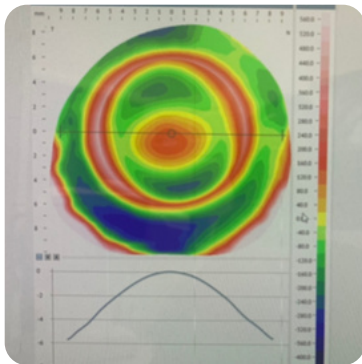
Anterior segment examination

Significant central corneal thinning and scarring

OD>OS

Eaglet Eye ESP performed

OD OS



Maxim trial lens selected

OD 7.03/-6.00 / 16.4 (7.34 lens was broken in fit set so had to use next lens)

Sag 5.59

SOR over refraction -3.75 -300 x 88 20/50-1

OS 7.5/-4.00 / 16.4 (again 7.34 was broken so used this lens instead)

Sag 5.19

SOR 20/40-1

Maxim 3D lenses were designed based off of ESP data

Maxim 3D Front Toric

7.34 -7.75/-3.00 X088

16.4/9.0, 5.58 SAG, 45 degree angle offset

Haptic Deviation 551, CT .300

Maxim 3D

7.50 -5.75

16.4 9.0, 5.23 SAG, zero angle offset

CT .250

Initial Lenses

OD

Fit could be improved slightly (top edge ½ step tight, bottom edge ½ step flat, mild inferior decentration)

Decrease central sag by 100µm

Decrease mid-peripheral sag by 150um

(Mid peripheral corneal clearance around 400µm initially)

SOR +1.00 20/40

OS

Ideal central and limbal clearance (275um initial clearance, adequate limbal ~ 100um)

Even peripheral alignment

SOR -0.25 20/25-1

Final Lenses

Maxim 3D Front Toric

7.34 -6.75/-3.00 X088

16.4/9.0, 5.69 SAG, 22 degree angle offset

Haptic Deviation 496, CT .300

Maxim 3D

7.50 -6.00

16.4 9.0, 5.23 SAG, zero angle offset

CT .250

Optimum extra OU

Lens center thickness .250

OD

20/30-1

OS

20/20-1

Ideal fit and vision with scleral lenses

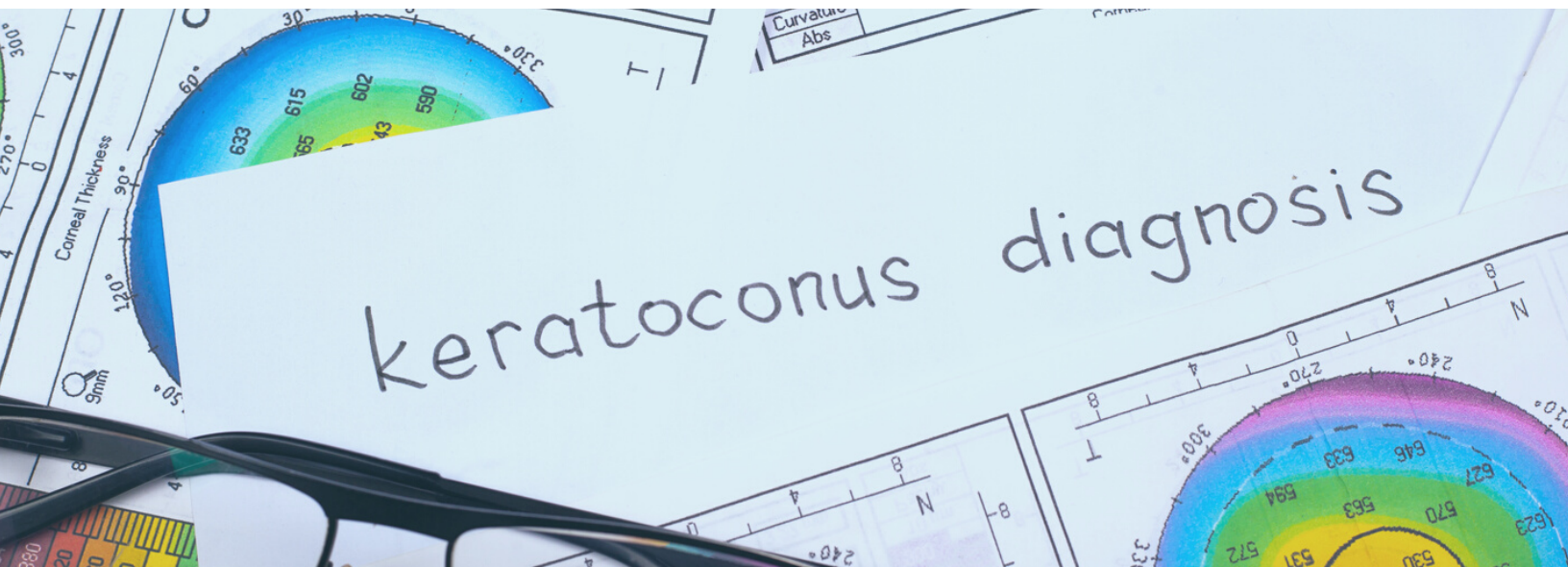
central clearance around 300um OD and 275um OS

Clinical pearls

- Custom scleral lenses improve efficiency
- Ideal results with two sets of lenses
- This case exemplifies scleral lens success in advanced KCN with corneal scarring
- N.H. reported a huge improvement in quality of life and is able to wear lenses comfortably for 12-14 hours per day

"Acculens continues to stay ahead of the curve with its Maxim 3D lens. This lens improves upon current quadrant-specific technology and allows you to make edge-specific changes at any clock hour instead of just 12/6 and 3/9. Furthermore, this can be incorporated with their many multifocal designs. If the patient has residual astigmatism and needs a front toric along with a quad-specific multifocal, NO PROBLEM! Acculens maxim 3D has you covered."

Alex Gibberman OD



AccuLens
THE clearest choice in sight

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