# FREEDOM IN DESIGN



### **CASE REPORT**

MAXIM 3D EAGLET ESP

DR. ALEX GIBBERMAN 20/20 EYECARE LOVELAND, OH

OFFSET MULTIFOCAL LENSES WITH ACCUVAULT FOR PINGUECULA

R.G. a 55-year-old Hispanic male

Keratoconus both eyes, right eye mild, left eye moderate

#### Patient presented for a scleral lens fitting to obtain improved vision at distance and near

Ocular history

- History of high astigmatism
- No history of contact lens wear
- Vision in the left eye was never as good as the right eye
- Never offered other options previously

#### Discussed the option of custom scleral lenses

- Goal to improve vision at all distances with scleral lenses
- R.G. expressed interest in multifocal scleral lenses

Pertinent Medical History

• Well-controlled diabetic

Pertinent Social History

• Frequently drives from Cincinnati to Mexico for over 24 hours straight without stopping other than gas and food.

BCVA with manifest refraction OD -0.75-5.75X179 20/25 OS -1.25-7.50X170 20/60

Pachymetry OD 454 µm OS 444 µm

**Right eye dominant** 

**Corneal examination** OD mild central thinning without scarring OS moderate thinning without scarring

Eaglet Eye ESP was performed. Diagnostic lenses were selected



Maxim diagnostic set lenses OD 7.67/15.9 Sag 4.57 SOR (add value) OR -050 20/20 vision

OS 7.67/15.9 Sag 4.57 SOR (add value) +050 20/20 vision

#### Maxim 3D multifocal lenses were designed based on ESP data

Initial Maxim 3D MF lenses OD distance centered aspheric design OS center near periscopic multifocal

#### Fit

Inferior temporal lens decentration more so OS Left lens designed using OnPoint system Ability to measure the amount of decentration In this case, decentration was 5 notches at 135°

**Initial lenses** Two right lenses designed Lens 1 – based off of a diagnostic fitting set and fitting notes Lens 2 – based off of ESP with AccuVault due to a nasal pinguecula One left lens

OD Lens 1 – no AccuVault VA 20/20 near 20/30 SOR pl

Good comfort Mild awareness in area of pinguecula nasal Ideal clearance with mild, yet acceptable, mild inferior decentration

OD Lens 2 - with AccuVault VA 20/20 near 20/30 SOR pl Comfortable computer vision Outstanding comfort, much improved compared to prior lens No lens awareness Improved centration

## VA 20/20 near 20/25 SOR pl

OS

comfortable computer vision Lens designed without AccuVault over nasal pinguecula

Lens was comfortable, however not as comfortable as the right lens with AccuVault, wanted to vault the pinguecula for the left eye as well Central clearance  $400 \mu m$  – plan to reduce  $100 \mu m$ Lens edges were too flat, especially superior, plan to steepen edges accordingly and add AccuVault over pinguecula





#### OS Lens 2

Lens was steepened at the edges 360 as well as additional steepening in the superior quadrant along with AccuVault nasally over the pinguecula. Central clearance reduced by  $100\mu$ m. With these changes, the fit and comfort were ideal. Distance vision in this eye improved to 20/20. Near vision was 20/25. Comfortable computer and near vision were obtained.

#### **Clinical pearls**

- Determine dominant eye
- Multifocal success with improved alignment using scleral profilometry
- Ideal lens customization based on patient needs

"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





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