



Custom Onefit™ MED with Toric Haptic Improves Quality of Life for Moderate PMD High Astigmat

DR. IAN WHIPPLE, OD, VISION SOURCE, FARR WEST, UT

INTRODUCTION/HISTORY

46 YO Hispanic, highly astigmatic male presents with moderate Pellucid Marginal Degeneration OD and best corrected spectacle visual acuity of 20/100 OD. His OS shows no topographic changes and is easily correctable to 20/20. His current spectacle RX is OD Plano -6.50 x 045 to 20/100, OS +0.50 -0.75 x 123 to 20/20. He was previously fit in our office with a Onefit™ Sym-Toric scleral lens (OD). He was 20/25 with his lens but reported heavy fluctuations in vision, likely due to rotation, and intermittent foreign body awareness. This year, the patient simply asked if we could improve lens comfort and quality of his OD vision.

CURRENT OD LENS:

Onefit™, base curve 8.20, diameter 15.2, power +0.50 -1.50 x 117 (Onefit™ Sym-Toric), spherical haptic Landing Zone, standard Limbal Zone value, distance visual acuity of 20/25. No compromises were noted to the cornea, limbus, or sclera, other than subjective occasional foreign body awareness.

PLAN/GOAL:

Refit the patient into a larger diameter lens, Onefit™ MED design, to create better alignment and stabilize the optics. Overall, a fit with more stability should improve quality and consistency of visual acuity.

DIAGNOSTIC LENS:

Onefit™ MED, SAG 4500, diameter 15.6, power -2.50, Mid-Peripheral standard, Limbal Zone standard, toric haptic Landing Zone +75 / -75.

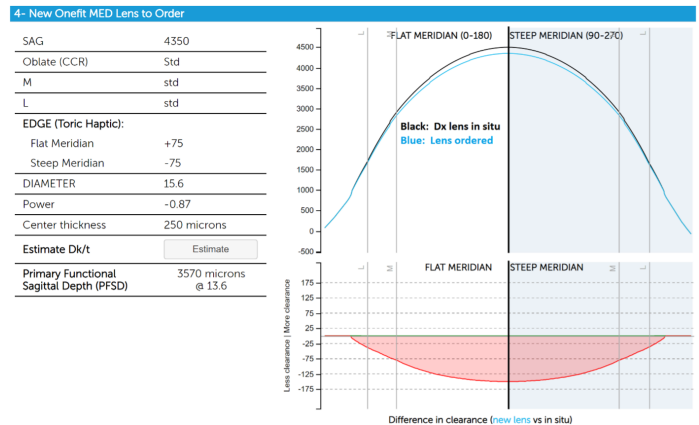
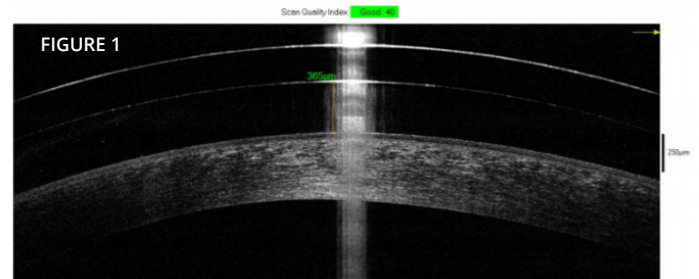
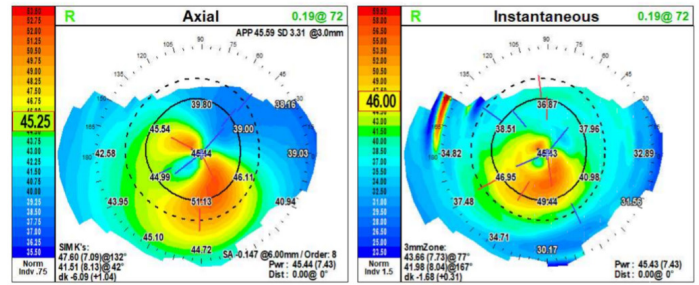
OBJECTIVE EVALUATION - IN SITU: ONEFIT™ MED

Excellent centration and stability, 356µm vault centrally, 225µm Mid-Peripheral Zone Fluid Reservoir (FR) Depth, 150µm Limbal Zone FR Depth, toric haptic markers indicate stable/habitual orientation at 8 o'clock and 2 o'clock, over-refraction: PLANO, visual acuity 20/25. Utilization of the toric haptics created better alignment and eliminated lens flexure causing astigmatism needed in previous, smaller lens. (Fig. 1.)

NEW LENS:

At 30-45 minutes 4500 SAG resulted in excessive FR Depth (356µm) - targeted SAG FR depth is 200-300µm. Mid-Peripheral FR Depth was 225µm, needing a reduction of 75µm to reach a target depth of 150µm at 30-45 minutes. Limbal zone depth was 150 µm, therefore needing a reduction of 37µm. The Onefit™ MED Fitting/Design Tool, found at blanchardlab.com, illustrated and predicted the effects of parameter changes for the final fit of a lens.

SAG value was decreased from 4500 to 4350 to meet the suggested FR depth. The expected final central vault of the new lens would be 150-200µm at 4+ hours of wear. Reducing the SAG Height by 150µm also results in a 75µm decrease of FR Depth for the Mid-Peripheral zone, thereby meeting the target depth of 150µm. In addition, the SAG change created a Limbal zone reduction of -37µm which also met the suggested FR targeted depth of 112µm after 30-45 minutes for this zone. Finally, the SAG change resulted in an overall power reduction of -0.87D from -2.50 (spherical correction only). Parameter changes from the Dx lens for the new Rx Onefit MED lens were automatically calculated with the online



BLANCHARD ONEFIT™ MED WITH TORIC HAPTIC

SAG 4350 / Diameter 15.6 / Spherical power -0.87

Mid-Peripheral Zone Standard / Limbal Zone Standard / Toric Haptic Landing Zone +75/-75

- +75 Flatter scleral alignment value
- 75 Steeper scleral alignment value

CONCLUSION:

Patient is extremely happy with his new lens, stating that vision is much more consistent throughout all wearing hours, and the intermittent foreign body awareness is no longer present. Refitting this patient with a Onefit™ MED lens with toric haptics has provided better alignment and stabilization of the optics. Utilizing the online design/fitting tools gave me total control of all lens parameters and allowed me to achieve the ideal fitting lens in one visit---saving me in warranty exchanges and chair time.