

EXTREME DRY EYE SECONDARY TO CORNEAL EXPOSURE

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Introduction/History

65 y/o Caucasian female with exposure keratitis in the right eye following eyelid surgery for thyroid orbital disease. Previous strabismus SX for hypertropia. Type II diabetes and hypercholesterolemia.

Referred by MD for scleral lens fitting to improve vision and comfort.

Objective Findings/Subjective Comments

Current lenses:

OD: Onefit 15.2mm- 7.40 BC/70 CCR/-1.75-075 x 085/XLC/Flat 1/Flat 2
 OS: monthly disposable soft toric

Manifest spectacle RX (2018):

OD -0.75 - 2.00 x 178 20/25
 OS -1.25 - 0.75 X 027 20/20

SLE: Px improved but isolated SPK. Patient desires improved VA, comfort and longer hours of wear.

Dx Lens:

Onefit MED w/ Toric Haptics (TPC) 4600 sag / 16.0 Dia / -0.50 / Mid Peripheral Zone = Std / Limbal Zone = Std / TPC Landing Zone = +75/-75

Central clearance (OCT): 224 µm (30 minutes)

Over-refraction: +2.75, 20/20-

Toric Haptic Laser Etch (Hash mark indicates flatter meridian) – 110-115°

SLE: lens slightly decentered inferiorly; too flat in both meridians

Initial Lens Order

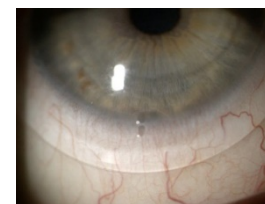
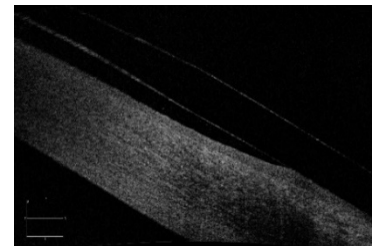
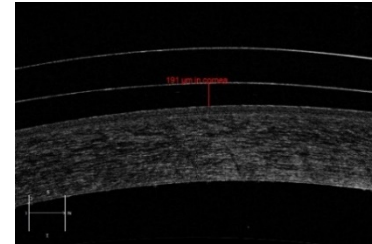
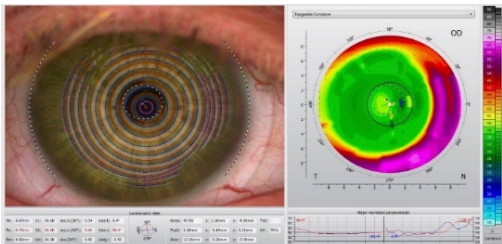
Order MED TPC / Contamac Optimum Extra – Dk 100 / Hydra-PEG Sag 4600 / 16.0 Dia / +2.37 / Mid Peripheral Zone = Std / Limbal Zone = Std / TPC Landing Zone = +25 /-150

First dispense:

SLE: Excellent overall fit with acceptable Fluid Depth Central. May order CCR adjustment and Contamac Infinite material (Dk 180) at follow-up to increase scleral system DK for optimum oxygenation.

BCVA: 20/25

Px: Use autologous serum (3-4 drops) in lens bowl, top off with non-preserved saline



Follow-up:

Wearing time of 10-12 hrs/day, with a BCVA of 20/30+

SLE: Slight staining inferior cornea, lens slightly tight superiorly. (Flat Toric Haptic hash marks at 110°), against-the-rule cylinder. Limited tear exchange, no fogging. Central Vault Fluid Depth = 191µm.

Assessment – lens tight; limited tear exchange; need to increase Dk of scleral system with CCR (Oblate design option) and higher Dk material.

First Warranty Exchange Order:

Onefit MED TPC / Optimum Infinite / Hydra-PEG 4550 Sag / 16.0 Dia / CCR 70 / +5.00 / Mid-Peripheral = Std / Limbal = +125 / TPC Landing Zone = +75 /-100

Second Dispense:

Patient raves about increased comfort immediately
 BCVA – 20/25
 SLE: good centration; Landing Zones aligned to sclera, toric hash marks indicate flatter meridian orienting to 110°

Patient to return in 2-3 weeks.

SUMMARY

Subjective remarks confirm enhanced comfort with increased hours of wear. Objective findings show no SPK with excellent lens centration. Concerns of providing optimum oxygenation are resolved with the CCR 70 oblate design, combined with the 50 µm decreased Sag value reduced central Fluid Reservoir by 120µm. Other contributing factor was switching the material from Optimum Xtra (100 Dk) to Optimum Infinite (180 Dk). Blanchard Dk/T fitting tool substantiates an increase in Dk from, 20Dk to 32Dk with the changes and BCVA 20/20-.