

MAXIM 3D™

FREEDOM IN DESIGN

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MAXIM SCLERAL LENSES FOR DRY EYES

A 39-year-old Asian female presented with severe dry eyes secondary to Sjogren's syndrome. She had been suffering from ocular burning, soreness, and grittiness for 3 years; she was unable to achieve adequate relief with treatments including artificial tears, topical cyclosporine 0.05%, topical lifitegrast, punctal plugs, punctal cauterization, and thermal pulsation therapy on her eyelids.

Although her incoming vision was 20/20 in each eye with well-fitting, spherical, daily soft contact lenses, she was very symptomatic and had an incoming OSDI (Ocular Surface Disease Index) score of 43.75, indicating severe dry eye disease.

Confrontation tests were unremarkable. Slit lamp examination revealed 2+ conjunctival staining OU, and diminished tear film with 1-2+ PEE OU. The patient had noticeable difficulty keeping her eyes open.

Maxim trial scleral lenses with a toric design were applied on her eyes during the consultation and brought immediate relief to her dry eye symptoms. Parameters of the trial lens were: 7.67 mm BC, -3.00 D Power, 17.5 mm diameter, 8.5 mm optic zone, 5.48 sag, and 200 microns toricity. This lens was used in both eyes to perform the initial fitting.

Custom lenses were ordered and the patient returned for her scleral lens fitting, training and dispense. Parameters for the first set were:

OD: Maxim 3D Custom, Optimum Extra, toric, 7.67, 17.5, -7.25, clear

OS: Maxim 3D Custom, Optimum Extra, toric, 7.67, 17.5, -7.75, clear

The patient demonstrated proficiency in scleral lens application, removal, and handling. She also reported good comfort with lenses in each eye, with 20/20 VA OD and OS. Although the fit appeared mildly tight around OU, they were dispensed to trial.

On her first follow up, she reported significant improvement to her ocular burning, grittiness, and soreness overall. She was wearing them an average of 15 hours per day. Additionally, she was able to wear her scleral lenses at her wedding, which allowed her to enjoy her special day with improved ocular comfort and vision; she was able to keep her eyes open despite severe dry eye.

Upon lens fit evaluation after 7 hours of wear, it was noted that both lenses were tight and there was minimal limbal clearance nasally. Adjustments were made to loosen the lenses OU, increase the vault, and update the power. Lenses were ordered and shipped directly to the patient.

Parameters of Final 3rd set:

OD: Maxim 3D Custom, Optimum Extra clear 7.67, 17.5, -7.00, SAG 5.42

OS: Maxim 3D Custom, Optimum Extra clear 7.67, 17.6, -7.50, SAG 5.63

With quadrant specific offset angle of 0 degrees:

SAG Difference Flat/Steep: OD: .198 OS: .187

With the newest set, the patient reported a similar level of relief to her dry eyes, but easier removal with the looser design. Overall, her quality of life has improved wearing the Maxim 3D scleral lenses. Although she still experiences dry eye symptoms due to Sjogren's syndrome, and has to use artificial tears and protective eye goggles over her lenses in particularly dry environments, she is much happier and more comfortable.

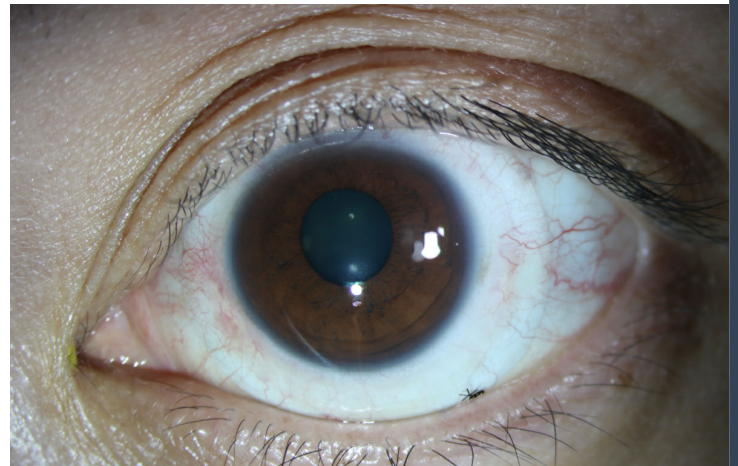
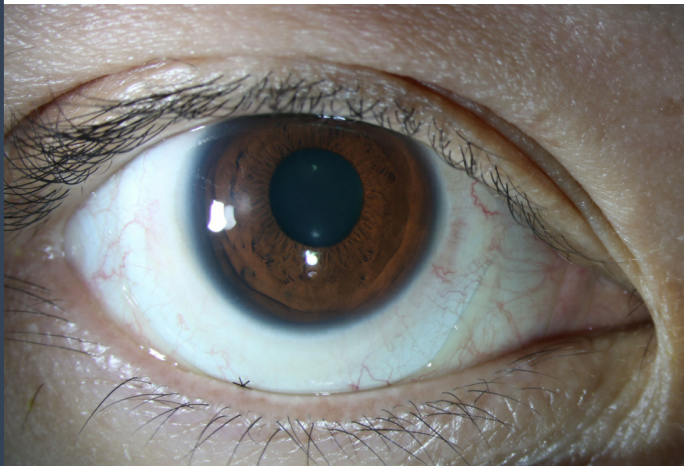


Figure 1. Maxim 3D Scleral Lenses on patient's eyes. 2nd set of lenses during fitting, with tightness noted mostly nasally OU.

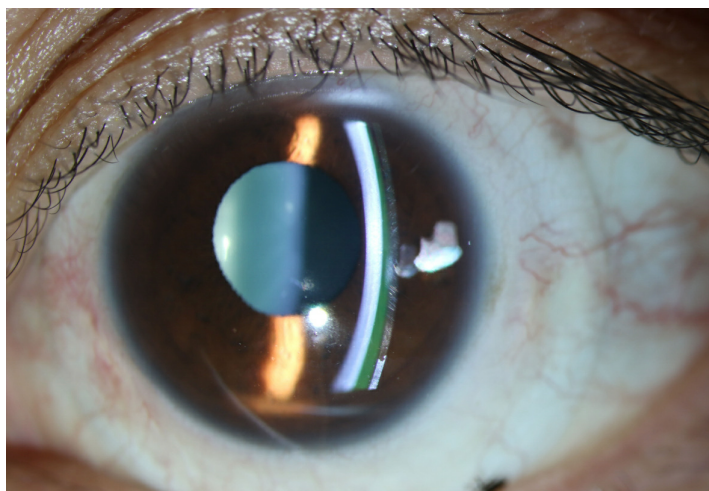


Figure 2. Image of Maxim 3D Custom scleral lens on patient's eye.