

# CASE REPORT: Scleral Lens Fogging Improved by Adding Tangible® Hydra-PEG®

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## CASE HISTORY:

I had a longtime patient, MT, present to the clinic for her annual eye exam. MT was a 56 year old white female who currently wears a custom soft lens in the OD. The prescription for the contact lens was -9.50-1.75x180 (20/30). Her manifest refraction was OD: -11.50-3.00x180 (20/40-) and OS Plano (20/20). She reports that she does not see great out of the contact lens, but vision is better than glasses. She also complained of fluctuating vision in the OD with the contact lens and she also had some dryness issues. We discussed her contact lens options after finishing her comprehensive eye exam.

After reviewing some of the pros and cons of different lens modalities, she opted to try a scleral lens. Possible benefits of the scleral lens included more stable vision and an improvement in dry eye.

## EXAMINATION:

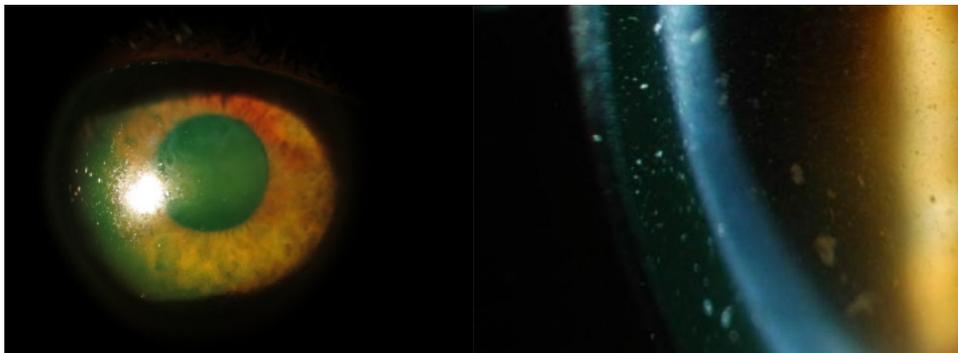
Topography of the OD showed fairly normal, with the rule astigmatism. MT returned to the clinic for a scleral lens fitting. The diagnostic scleral lens was 7.34 base curve/ 15.0 diameter/ -4.00. This lens showed great centration and stability. Central clearance was 337 um after 30 minutes of settling. There was edge alignment 360 with no areas of edge lift or compression. The SCOR was -4.50 (20/25) The lens order: 7.34/ 15.0/ -8.25/optimum extra.

## FOLLOW-UP:

About 1 week later, MT returned for a lens dispense, and it went well. Insertion and removal training and lens care was reviewed. MT had great vision (20/25) with no SCOR. The comfort was great, per patient, and the fit looked great all around. The lens was dispensed and the patient was to return to clinic about 2 weeks later.

At the two week follow-up, the patient stated, "The lens is great, but after about 2 hours, it gets kind of fogged up. When I take it out, it looks like there are particles inside the fluid layer. Once I rinse it out and put it back in, the vision is good again, but it seems to fog up again after a few hours."

For MT, her slit lamp evaluation showed surface wettability and no signs of deposits, but posterior tear layer debris was visible. **(Figure 1)** She maintained a great lens fit with acceptable clearance and edge alignment. The next step was to change filling solution (was using non-preserved saline, and she switched to ScleralFil). One week later, the problem still persisted. The next step was to change lens care (was using Boston Simplus, changed to Clear Care). One week later, the problem still persisted. The next step was to add Tangible® Hydra-PEG® to the lens surface.



**Figure 1: Posterior tear layer with debris**

After one week, the patient stated, "I have no more problems with foggy vision! I can wear my lens for 12 hours per day without removing the lens!" The slit lamp exam showed decreased debris in posterior tear lens. The patient has had no issues for over 8 months.

## DISCUSSION:

The patient and practitioner can both be involved when choosing which change is best to try and eliminate scleral lens fogging. Sometimes, the next step would be something that was easiest/most convenient. By simply changing the filling solution or the care system, the patient would know if it resolved the issue quickly, easily, and without a huge expense. Cost can also play a role when deciding what tactic to use with scleral lens fogging. Typically, I like to try simple and cheap methods first. Some labs had lens warranty restrictions – to change materials or add Tangible® Hydra-PEG®, there is an additional expense, which is usually passed onto the patient. You can add Tangible® Hydra-PEG® anywhere during the fitting process, even with the first lens fit. If the lens includes Tangible® Hydra-PEG® with no additional cost, you may consider adding it on all lenses. If there is an additional expense, you may consider adding it only for patients who need it. It boils down to the practitioner and the patient. Don't be afraid to ask your consultants for help – they hear from many practitioners daily with the same issues, and they know what works and does not work for the most part. Take full advantage of them when contact lens issues arise.



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