

**Patient Case: Dry Eye Disease With Inflammation Undergoing Cataract Surgery**

**Transcript**

[ISI Voiceover]

**Indication**

Xiidra® (lifitegrast ophthalmic solution) 5% is indicated for the treatment of signs and symptoms of dry eye disease (DED).

[Tran]

Hi, everyone. Thank you so much for attending this program. My name is Dr. Jeffrey Tran, and I'm a practicing ophthalmologist in the Atlanta area. I'm the founder of Stratus Eye. And today, I have an interesting case to go over with you guys.

This educational program is sponsored by Bausch + Lomb, and compensation was received from Bausch + Lomb to present this program. Please note that this is not an accredited CME program. Today, we're going to go over this patient case, a patient that is well suited for Xiidra® (lifitegrast ophthalmic solution) 5%, specifically a dry eye patient with inflammation, who's undergoing cataract surgery. So let's get started.

Okay, so we have a 60 year old female who is a data analyst. She was referred and scheduled for cataract surgery, and she's interested in getting a multifocal IOL. She has a history of refractive errors, presbyopia, and mild myopia. And she comes into our clinic with mild eye dryness in the evening.

[She] reports that her eyes feel a little tired and she has difficulty adjusting to changing light levels and difficulty driving and watching TV. She's been self-treated for the most part using artificial tears and reading glasses for near vision activities.

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So let's go into the slit lamp and see what we see. So, the first thing we see when we refract her in the right eye, she's about a minus 2 diopter CYL, no significant astigmatism with a 2.0 ADD and she's about 20/25.

In the left eye she's about 1.50 diopters. In the left eye she's about -1.50 diopters with a little bit of CYL of half diopters with axis 180 and 2.0 ADD and she's about 20/20 in that eye.

Other parameters that are important that we checked—her speed score was 8, her osmolarity was 310 and 325 in the right and left eyes, respectively. And her InflammDry was positive in both eyes. Meibography showed a grade 2+ with thick discharge.

She had corneal fluorescein staining about 1+ in the right eye and 3+ plus in the left eye.

Since the patient exhibits signs of visually significant ocular surface disease, surgery date was rescheduled. This is in alignment with the ASCRS algorithm guidance.

The first thing we did was, we provided the patient some education in establishing basic self-care. Since dry eye impacts the outcome in recovery cataract surgery, I frequently start with patient education and basic self-care.

These foundational recommendations include warm compress, lid scrubs, and eye dry nutraceutical.

For context, the health of the ocular surface defines, the visual quality, and refractive stability for the ophthalmological surgical patient, treating the signs of dry eyes could improve the smoothness of the ocular surface, which could translate to more accurate measurements.

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A common issue for patients with dry eyes undergoing cataract surgery is inaccurate preoperative measurements due to an irregular ocular surface. Patients may be unreceptive to needed ocular surface optimization, especially when their dry eye [disease] is asymptomatic or if they lack insurance coverage for tests or procedures or they're impatient and just want to proceed straight to surgery.

These are the common signals that I would pay attention to. Effectively educating patients on their abnormal ocular dry eye findings is essential for securing compliance with the recommended preoperative measures.

For patients choosing multifocal IOLs like in this case, optimizing the ocular surface is even more critical for successful visual outcomes.

So, now let's ask a big question. After providing patient education and establishing basic self-care, what is your recommended next step treatment for this patient? Number 1, we have Xiidra® (lifitegrast ophthalmic solution) 5% two times a day in both eyes. Number 2, cyclosporine twice a day in both eyes or number 3, meibomian gland probing. Take a few seconds here to think about which answer you might pick.

So for this patient, I would choose option number 1, Xiidra 5% two times a day. And let's talk about why. The safety and efficacy of Xiidra was assessed in four multicentered randomized prospective double mask vehicle-controlled studies, one phase 2 study and three phase 3 studies.<sup>1-5</sup>

The four studies evaluated the safety and efficacy of Xiidra compared to vehicle in 2,133 patients. In all four studies, a larger reduction in the eye dryness score, abbreviated EDS was observed with Xiidra at 6 and 12 weeks, in 2 out of the 4 studies an improvement in EDS was seen with Xiidra at 2 weeks.<sup>1,6</sup>

At week 12, a larger reduction in the inferior fluorescein corneal staining favoring Xiidra was observed in three out of the four studies.<sup>1</sup>

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So why should you consider Xiidra during the cataract pre-op for ocular surface optimization? Xiidra has been available in the US for nearly 10 years now and is a proven dry eye treatment that [has] had a lot of success across a broad range of patients.<sup>1</sup> It's designed to both work on active and inactive T cells to address inflammation via LFA-1 inhibition<sup>1†</sup> and it delivers early symptom relief as early as two weeks and it builds over time.<sup>1\*</sup>

<sup>†</sup>The exact mechanism of Xiidra in dry eye disease is not known.

<sup>\*</sup>Xiidra significantly reduced symptoms of eye dryness at 2 weeks in 2 of 4 studies, with improvements observed at 6 and 12 weeks in all 4 studies

Xiidra was also well tolerated in clinical trials. The most common adverse reactions reported in 5% to 25% of patients was instillation site irritation, altered taste sensation and reduction in visual acuity.<sup>1</sup>

Let's talk about why Xiidra makes sense for a patient undergoing cataract surgery. There was a study evaluating patients undergoing cataract surgeries with dry eyes in a multi-center prospective open label study of 100 eyes of 100 patients with preoperative dry eyes who were treated with and undergoing cataract surgery.<sup>7</sup>

Xiidra was observed to improve the signs of dry eyes before cataract surgeries. Results showed that there was a significant improvement versus baseline in ocular surface quality. There was no corneal staining in 63% of patients pre-op after a 28-day Xiidra treatment.<sup>7</sup>

The study also showed statistically significant improvement versus baseline in biometry accuracy after a 28-day Xiidra treatment, an improvement in accuracy of predicted final refractive outcome.<sup>7</sup> Note the data should be interpreted with the study design and these limitations in mind. No formal conclusion should be drawn.

So as for why I did not choose option 2 or option 3. Option 2, the cyclosporine, works differently than Xiidra. It works on inactive T cells.<sup>8,9</sup> Remember, Xiidra works both on active and inactive T cells. Specifically, it blocks T cell activation at multiple sites and it also targets active T cells, inhibiting their migration to the ocular surface and reduces the release of pro-inflammatory cytokines.<sup>1,8</sup>

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Option 3, the meibomian gland probing. The meibomian gland probing could be an option for obstructive MGD by clearing blockages and restoring proper oil flow.<sup>10</sup> However, the MG count in the score seems to suggest that this may not be the case.

So, back to this patient. For this patient, the surgery took place three weeks after improving the ocular surface quality and the accuracy of the predicted final refractive outcome is within half a diopter.

The right eye was about +0.5 diopters and the left eye was plano. The patient was very satisfied with the results of her vision and improved visual quality but she still experienced some visual fluctuations.

One month after surgery, following the use of post-op antibiotics and steroids, her dry eye symptoms reduced substantially. Assessments indicate that there's still some tear film instability, some little bit ocular surface inflammation and at this time treatment options were reconsidered.

For this patient, I would educate her on lifestyle modifications that can help with dry eye post operative, including adequate hydration, use of a humidifier and eyelid hygiene like a warm compress or lid scrubs.

The patient may benefit from also avoiding eye irritants such as wind and smoke. But now let's ask the big question. What is your recommended post-op treatment for this patient? Again, option number 1, Xiidra 5% two times a day in both eyes; number 2, over the counter dry gel or ointment; or number 3, punctal occlusion. Again, take a few seconds and think about what you might choose for this patient.

So let's talk about why I think that option number one may be the best option for this patient. Cataract surgery can worsen dry symptoms due to changes in tear film stability and post-surgical inflammation.<sup>11</sup>

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As mentioned previously, Xiidra is FDA approved for the treatment of signs and symptoms of dry eye disease.<sup>1</sup> In the cataract surgery study, continued use of Xiidra post operatively were shown to significantly improve dry eye disease symptoms.<sup>7</sup> There was a significant and sustained improvement versus baseline in symptoms as measured by speed scores. 98% of patients had a speed score of less than 10 post-op after a continued 28-day Xiidra treatment versus 71% [at] baseline.<sup>7</sup> And there was no corneal staining in 54% of patients post-op after a continued 28-day Xiidra treatment. 100% of these patients, remember, had corneal staining at baseline.<sup>7</sup>

Now back to the patient case. After cataract surgery, the patient used Xiidra as part of her post-surgical dry eye management with minimal postoperative dry eye disease symptoms. So, let's talk about the other options. Why didn't I choose option 2 or option 3? Option 2, the over the counter eye gel—the use of over the counter eye gel is typically used as a first step for treating dry eyes following cataract surgery. However, eye gels do not address the inflammatory component of dry eyes.

The ASCRS recommendations recommend going to step two which includes the use of prescription treatments.<sup>12</sup> Option number 3, the punctal occlusion. Punctal occlusion may be appropriate for patients with non-obstructed MGD. However, in this scenario there is dry eye inflammation, so is used.<sup>13</sup>

So now focusing on our patient again at the follow up weeks 12 weeks after initiating Xiidra twice a day, the patient feels more confident and experiencing fewer visual fluctuations. The patient shows stable ocular surface health and continued improvements in symptoms. Let's go over some of the key points about this case again and why this patient is a great candidate for Xiidra.

Remember, this is a patient coming to us interested in cataract surgery. She had preoperative signs of dry eye disease and was interested in a multifocal lens. One of the most critical things about cataract surgery is of course biometry. The more accurate the measurements, the more accurate you can be as a surgeon.

So for this patient, with that in mind and with the data about the cataract surgery study, I knew that treating the patient with Xiidra preoperatively and postoperative could yield the outcomes that I was seeking.

She had signs of inflammation. We treated her with Xiidra and even in the post operative phase, we continued her on Xiidra and consequently, we were able to achieve both the objective outcomes that we wanted to.

Her vision was near plano and the subjective component as well. She reported feeling really good and had really no visual complaints. To me that is a sign of a successful cataract surgery case.

[ISI Voiceover]

### **Indication**

Xiidra® (lifitegrast ophthalmic solution) 5% is indicated for the treatment of signs and symptoms of dry eye disease (DED).

### **Important Safety Information**

- Xiidra is contraindicated in patients with known hypersensitivity to lifitegrast or to any of the other ingredients.
- In clinical trials, the most common adverse reactions reported in 5-25% of patients were instillation site irritation, dysgeusia, and reduced visual acuity. Other adverse reactions reported in 1% to 5% of the patients were blurred vision, conjunctival hyperemia, eye irritation, headache, increased lacrimation, eye discharge, eye discomfort, eye pruritis, and sinusitis.
- To avoid the potential for eye injury or contamination of the solution, patients should not touch the tip of the single-use container to their eye or to any surface.
- Contact lenses should be removed prior to the administration of Xiidra and may be reinserted 15 minutes following administration.
- Safety and efficacy in pediatric patients below the age of 17 years have not been established.

You are encouraged to report negative side effects of prescription drugs to the FDA. Visit [www.fda.gov/medwatch](http://www.fda.gov/medwatch) or call 1-800-FDA-1088

**Please see Full Prescribing Information at [Xiidra-ecp.com](http://Xiidra-ecp.com)**

[Tran]

Anyways, thank you so much for paying attention to this case. I hope you found a couple key points about how Xiidra may be able to help you in your clinic as well. Thank you so much for watching. We'll see you next time.

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