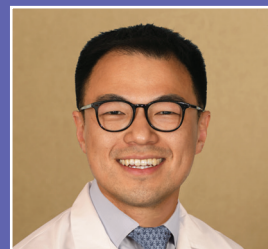


TREATMENT OF MACULAR EDEMA ASSOCIATED WITH UVEITIS FOLLOWING CATARACT EXTRACTION WITH INTRAOCULAR LENS PLACEMENT (IRVINE-GASS SYNDROME)

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Ocular inflammation with cystoid macular edema (CME) is a common occurrence following cataract surgery and intraocular lens (IOL) implantation—a phenomenon referred to as Irvine-Gass syndrome.¹ In most patients, CME in Irvine-Gass syndrome is benign and self-limiting; however, in some patients, Irvine-Gass syndrome may become refractory, leading to persistent CME and impaired visual function.¹

Although Irvine-Gass syndrome is not an unusual occurrence, there are no definitive or consensus guidelines for its management.¹ Nevertheless, ocular corticosteroids are considered a mainstay of treatment.¹ Intravitreal corticosteroids, in particular, are a popular treatment option, although they can be associated with a variety of limitations, i.e., visual disturbances such as floaters.² This limitation, along with others, have led to a desire for alternate modalities of ocular corticosteroid delivery.



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Peter Chang, MD, is a paid consultant of Bausch + Lomb.

Here, we describe an instance of CME associated with Irvine-Gass syndrome that was treated with XIPERE® (triamcinolone acetonide injectable suspension) 40 mg/mL—a suprachoroidal delivery option. This patient had shown inadequate response to topical anti-inflammatory drugs, expressed dissatisfaction with visual disturbances caused by an intravitreal corticosteroid injection, and was an inappropriate candidate for an intravitreal corticosteroid implant. One month after initiation of XIPERE treatment, the patient's CME had resolved, and the patient reported good satisfaction with XIPERE treatment.

INDICATION

XIPERE® (triamcinolone acetonide injectable suspension) for suprachoroidal use is a corticosteroid indicated for the treatment of macular edema associated with uveitis.

IMPORTANT SAFETY INFORMATION

Patients should be monitored following injection for elevated intraocular pressure. See Dosage and Administration instructions in full Prescribing Information.

Please see additional Important Safety Information throughout and accompanying full Prescribing Information.

XIPERE
(triamcinolone acetonide
injectable suspension) 40 mg/mL

Case Report: Cystoid Macular Edema Associated With Irvine-Gass Syndrome

BACKGROUND: We present a 68-year-old Caucasian female in good overall health. She had hypertension and hypercholesterolemia, which were adequately controlled with medication.

DIAGNOSIS: The patient was referred to our practice to address recurrent CME in her left eye following complicated cataract surgery with implantation of an anterior-chamber IOL by another surgeon. She had prolonged postsurgical anterior uveitis with CME, which improved with topical corticosteroid and NSAID drops for approximately 2 months, but CME rebounded upon tapering of the drops. On her initial visit, the IOL was well positioned, with no cells or flare in the anterior chamber. However, the patient's visual acuity had declined to 20/150, fluorescein angiography revealed petaloid leakage and late hyperfluorescence from the optic disc, and SD-OCT revealed a central subfield thickness of 611 μm (**Figure 1**)—all findings strongly suggestive of Irvine-Gass syndrome. Based on these findings, a diagnosis of CME associated with Irvine-Gass syndrome was made.

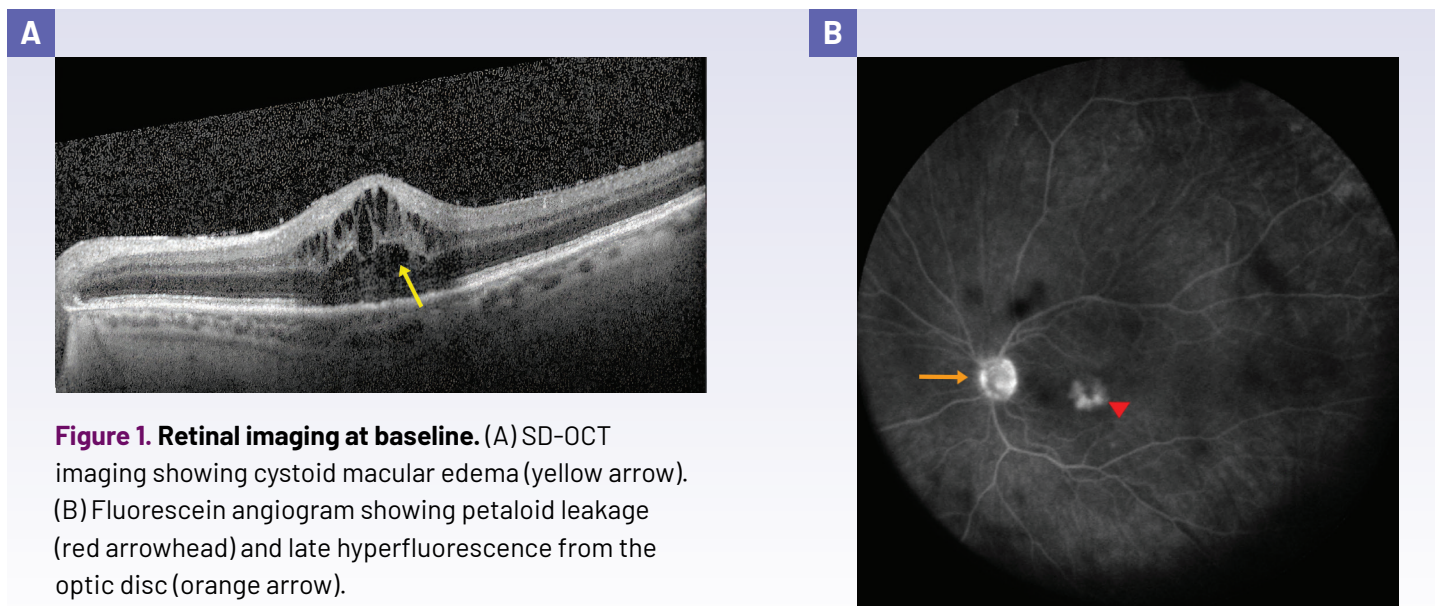


Figure 1. Retinal imaging at baseline. (A) SD-OCT imaging showing cystoid macular edema (yellow arrow). (B) Fluorescein angiogram showing petaloid leakage (red arrowhead) and late hyperfluorescence from the optic disc (orange arrow).

TREATMENT: The referring surgeon had started the patient on a topical anti-inflammatory regimen that included prednisolone acetate 1% and ketorolac 0.4%, but the patient's CME recurred with drop taper.

At our practice, she was given an intravitreal injection of triamcinolone acetonide, but this led to an unwanted "snow globe effect" for 2 to 3 weeks post injection, where the patient could see dispersed triamcinolone acetonide particles in her visual field. Nevertheless, the patient's central subfield thickness (CST) decreased to $\sim 400 \mu\text{m}$, and her visual acuity improved to 20/60. However, the patient's CME recurred after 6 weeks, necessitating a change in treatment.

Finally, the patient was administered a single injection of XIPERE. Subconjunctival lidocaine was administered prior to injection, and an anterior chamber paracentesis was performed immediately after injection to minimize the potential risk of acute intraocular pressure elevation.

Four weeks post injection, the patient's CST had decreased to 301 μm , and her fluorescein angiography findings had normalized (**Figure 2**). The patient's visual acuity had improved to 20/30. She reported feeling happy that she "had no floaters after the procedure" and was able to adequately manage postprocedural eye pain using over-the-counter acetaminophen and ibuprofen. Overall, she felt that XIPERE injection was "a very smooth procedure." Owing to these favorable outcomes with a single XIPERE injection, a second injection was not required as the patient's CME did not recur. Her vision remained excellent, without CME recurrence, at 9 months after her single XIPERE injection.

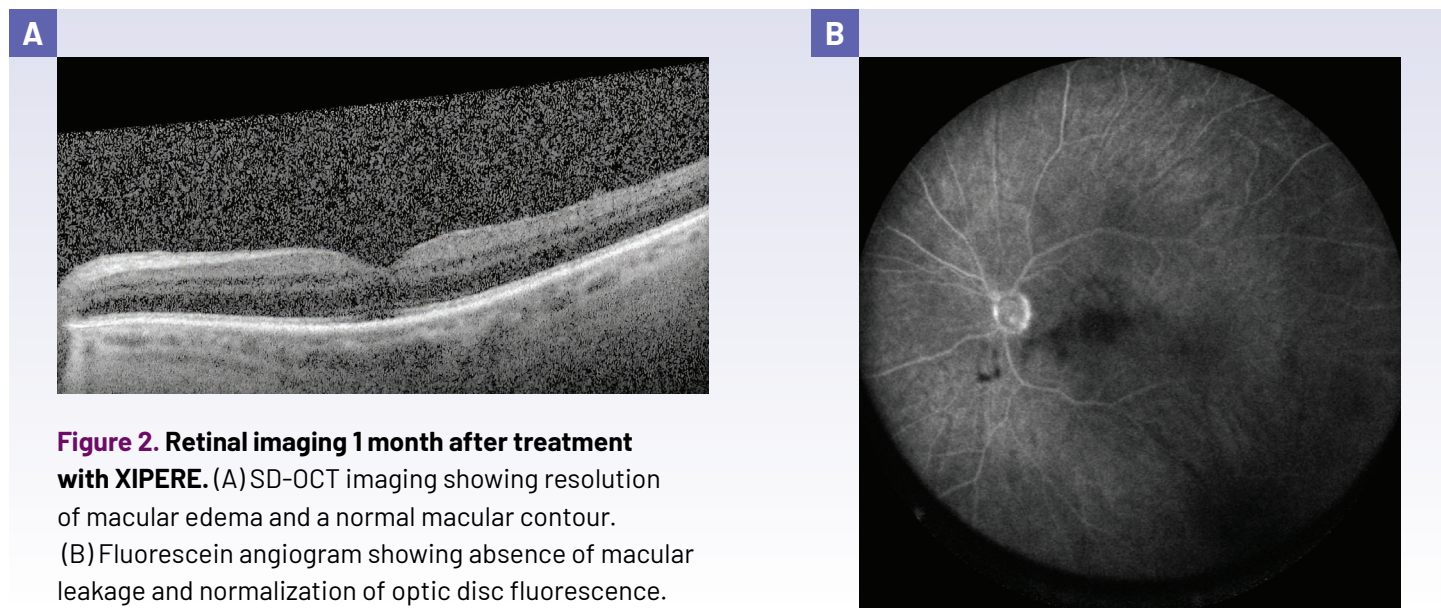


Figure 2. Retinal imaging 1 month after treatment with XIPERE. (A) SD-OCT imaging showing resolution of macular edema and a normal macular contour. (B) Fluorescein angiogram showing absence of macular leakage and normalization of optic disc fluorescence.

WHY XIPERE®?

After the patient complained of the "snow globe effect" following intravitreal injection of triamcinolone acetonide and later displayed recurrence of macular edema, a change in treatment was warranted. Dexamethasone and fluocinolone acetonide intravitreal implants were considered, but deemed inappropriate due to the risk of implant migration into the anterior chamber and potential damage to the corneal endothelium.³ Periocular triamcinolone acetonide injections were also considered, but these were deemed less preferable based on outcomes from the PeriOcular versus INTravitreal corticosteroids for uveitic macular edema (POINT) Trial, which showed that periocular triamcinolone acetonide injections have lower efficacy than intravitreal triamcinolone acetonide injections for the treatment of uveitic macular edema.⁴

XIPERE was selected to deliver triamcinolone acetonide due to some of the limitations of intravitreal triamcinolone acetonide injections. In contrast to intravitreally administered drugs, XIPERE is administered as a suprachoroidal injection that delivers triamcinolone acetonide into the anatomical compartment between the choroid and sclera.⁵ With this delivery route, XIPERE provides durable immunosuppressive and anti-inflammatory activity that has the potential to last up to a year, following 1 or 2 injections.⁶

IMPORTANT SAFETY INFORMATION (CONT'D)

- XIPERE® is contraindicated in patients with **active or suspected ocular or periocular infections** including most viral diseases of the cornea and conjunctiva, including active epithelial herpes simplex keratitis (dendritic keratitis), vaccinia, varicella, mycobacterial infections, and fungal diseases.
- XIPERE® is contraindicated in patients with known **hypersensitivity to triamcinolone acetonide** or any other components of this product.

Please see additional Important Safety Information throughout and accompanying full Prescribing Information.

XIPERE®
(triamcinolone acetonide
injectable suspension) 40 mg/mL

CONCLUSIONS

Irvine-Gass syndrome refers to the ocular inflammation and cystoid macular edema that occurs in some patients following cataract surgery.¹ Ocular corticosteroids may be utilized in the treatment of cystoid macular edema caused by Irvine-Gass syndrome.¹ This case study describes a patient with cystoid macular edema associated with postsurgical uveitis who was treated with suprachoroidal injection of XIPERE. With XIPERE, the patient avoided the visual disturbance that had been induced by a prior intravitreal corticosteroid injection. Furthermore, this delivery method circumvented the corneal damage that may potentially be caused by the presence of an intravitreal corticosteroid implant in a single-chamber eye.³ While in this case study, XIPERE was used after IVT, based on my clinical experience with this patient and others, XIPERE has moved up in my treatment paradigm as a first-line therapy when an intraocular injection is needed.

Of note, the patient underwent anterior chamber paracentesis to reduce the potential risk of corticosteroid-related intraocular pressure elevation. It is recommended that patients always be monitored for intraocular pressure elevation immediately following suprachoroidal injection of XIPERE; appropriate monitoring may consist of a check for perfusion of the optic nerve head or tonometry.⁵

IMPORTANT SAFETY INFORMATION (CONT'D)

- Use of corticosteroids may produce cataracts, increased intraocular pressure, and glaucoma. Use of corticosteroids may enhance the establishment of secondary ocular infections due to bacteria, fungi, or viruses, and should be used cautiously in patients with a history of ocular herpes simplex.
- Hypothalamic-pituitary-adrenal (HPA) axis suppression, Cushing's syndrome, and hyperglycemia can occur following administration of a corticosteroid. Monitor patients for these conditions with chronic use.
- In controlled studies, the most common ocular adverse reactions were increased ocular pressure, non-acute (14%), eye pain, non-acute (12%), cataract (7%), increased intraocular pressure, acute (6%), vitreous detachment (5%), injection site pain (4%), conjunctival hemorrhage (4%), visual acuity reduced (4%), dry eye (3%), eye pain, acute (3%), photophobia (3%), and vitreous floaters (3%), and in 2% of patients: uveitis, conjunctival hyperaemia, punctate keratitis, conjunctival oedema, meibomianitis, anterior capsule contraction, chalazion, eye irritation, eye pruritus, eyelid ptosis, photopsia, and vision blurred.

The most common non-ocular adverse event was headache (5%).

- Corticosteroids should be used during pregnancy or nursing only if the potential benefit justifies the potential risk to the fetus or nursing infant.

To report SUSPECTED ADVERSE REACTIONS, contact Bausch + Lomb at 1-800-321-4576 or FDA at 1-800-FDA-1088 or visit www.fda.gov/medwatch.

Please see additional Important Safety Information throughout and full Prescribing Information [here](#).

References: 1. Orski M, Gawęcki M. Current management options in Irvine-Gass syndrome: a systemized review. *J Clin Med*. 2021;10(19):4375. 2. Charalampidou S, Nolan J, Ormonde GO, Beatty S. Visual perceptions induced by intravitreal injections of therapeutic agents. *Eye (Lond)*. 2011;25:494-501. 3. Röck D, Bartz-Schmidt KU, Röck T. Risk factors for and management of anterior chamber intravitreal dexamethasone implant migration. *BMC Ophthalmol*. 2019;19(1):120. 4. Thorne JE, Sugar EA, Holbrook JT, et al. Periocular triamcinolone vs. intravitreal triamcinolone vs. intravitreal dexamethasone implant for the treatment of uveitic macular edema: the PeriOcular vs. INTravitreal corticosteroids for uveitic macular edema (POINT) trial. *Ophthalmology*. 2019;126(2):283-295. 5. XIPERE® (triamcinolone acetonide injectable suspension) [package insert]. Bridgewater, NJ: Bausch & Lomb Incorporated; 2022. 6. Khurana RN, Merrill P, Yeh S, et al. Extension study of the safety and efficacy of CLS-TA for treatment of macular oedema associated with non-infectious uveitis (MAGNOLIA). *Br J Ophthalmol*. 2022;106(8):1139-1144.

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