



Received	14-Dec-25	Accepted	04-Mar-26
Revised	22-Feb-26	Published	12-Mar-26
DOI	https://doi.org/10.5281/zenodo.20675845		

Sudden Visual Decline After Cataract Surgery: A Case of Irvine–Gass Syndrome

Haziel Rynjah¹

¹Assistant Professor, Department of Optometry, Royal Global University, Assam, India

Abstract

Irvine–Gass syndrome (IGS), also known as pseudophakic cystoid macular oedema, is a common cause of decreased visual acuity following uncomplicated cataract surgery. We report the case of a 71-year-old male who developed cystoid macular oedema one month after cataract extraction with intraocular lens implantation. Diagnosis was based on reduced visual acuity and characteristic findings on OCT and fundus evaluation. The patient was managed conservatively with topical NSAIDs. This case highlights the importance of recognizing Irvine–Gass syndrome early to prevent persistent visual impairment.

Keywords: Irvine–Gass syndrome, Pseudophakic cystoid macular oedema, Cataract surgery, Optical coherence tomography (OCT), Topical NSAIDs

Introduction

Irvine–Gass syndrome (IGS), or pseudophakic cystoid macular oedema, is characterized by accumulation of fluid in the macula after cataract surgery. Although cataract extraction is generally safe, IGS remains one of the most frequent postoperative complications leading to decreased vision. The condition is usually self-limiting; however, persistent oedema may cause long-term vision loss. Diagnosis is confirmed with optical coherence tomography (OCT) and fluorescein angiography (FA). Treatment typically begins with topical non-steroidal anti-inflammatory drugs (NSAIDs), while refractory cases may require corticosteroids or intravitreal therapy.

Case Presentation

A 71-year-old male presented to the outpatient clinic with complaints of sudden onset blurred vision, photophobia, and mild aching pain in the right eye one month after undergoing uncomplicated cataract surgery. He reported no history of trauma, redness, discharge, or floaters. He denied systemic illnesses such as diabetes mellitus or hypertension.

The patient had undergone phacoemulsification with posterior chamber intraocular lens implantation (PCIOL) in the right eye one month earlier and small-incision cataract surgery (SICS) with IOL implantation in the left eye six months earlier in Nepal. Both surgeries were reported to be uneventful, and the patient achieved satisfactory visual recovery initially.



There was no history of previous ocular inflammation, glaucoma, retinal disease, or ocular trauma. He was not using any topical or systemic medications and reported no known drug allergies. Family history was unremarkable.

Examination Findings

Visual acuity testing revealed:

- **Right eye (OD):** 6/60 unaided, improving to 6/18 with pinhole
- **Left eye (OS) :** 6/6 unaided

Near vision was N36 in OD and N10 in OS at 40 cm.

Objective refraction demonstrated compound myopic astigmatism in the right eye ($-1.50/-1.00 \times 90$). Best-corrected visual acuity improved to 6/18 OD and 6/6 OS.

Extraocular movements were full, and ocular alignment was orthophoric at distance and near.

Slit-Lamp and Anterior Segment Evaluation

Slit-lamp biomicroscopy showed:

- **Conjunctiva and cornea:** Clear in both eyes
- **Anterior chamber:** Normal depth, no cells or flare
- **Iris:** Normal architecture
- **Lens status:** Well-centered PCIOL in both eyes
- **Vitreous:** Clear, no opacities or cells

Intraocular pressures, measured by applanation tonometry, were:

- **12 mmHg (OD)**
- **10 mmHg (OS)**

No signs of postoperative endophthalmitis, uveitis, or elevated intraocular pressure were observed.

Posterior Segment and Imaging

Dilated fundus examination revealed:

- **Right eye:** Healthy optic disc with 0.3 cup-to-disc ratio, epiretinal membrane (ERM) and cystoid spaces in the macular region consistent with macular edema
- **Left eye:** Normal optic disc and macula with intact retinal vasculature
- **Peripheral retina:** Normal in both eyes

Optical coherence tomography (OCT) of the right macula demonstrated:

- Multiple cystoid hypo reflective spaces
- Thickening of the macula
- Mild disruption of the outer retinal layers

These findings were consistent with cystoid macular oedema.

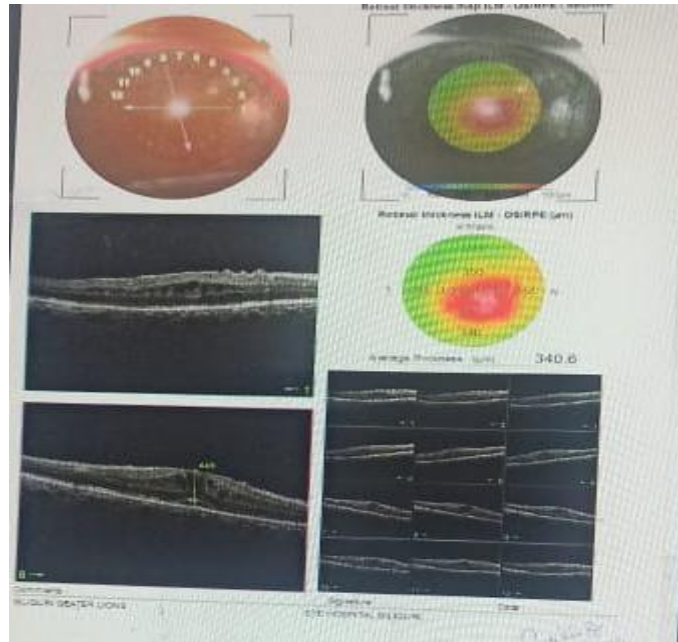


Figure: OCT report in OD

Diagnosis

Based on clinical and OCT findings, the patient was diagnosed with:

- Irvine–Gass syndrome (pseudophakic CME) — Right eye
- Pseudophakia — Both eyes
- Compound myopic astigmatism — Right eye
- Presbyopia — Both eyes

Management and Follow-Up Plan

The patient was started on topical nepafenac (Nepatop) once daily in the affected eye. He was counseled regarding the nature of the condition, expected prognosis, and the importance of compliance.

Follow-up was planned with:

- Serial visual acuity assessments
- Repeat OCT to monitor macular thickness
- Consideration of topical corticosteroids or intravitreal therapy if edema persisted

At initial follow-up, the patient reported gradual improvement in visual clarity.

Discussion

This patient developed Irvine–Gass syndrome one month after uneventful cataract surgery. The exact pathophysiology remains unclear but is believed to involve postoperative inflammation and blood-retinal barrier disruption. Most cases resolve spontaneously; however, untreated persistent oedema can result in permanent visual decline. Topical NSAIDs are effective in many cases.



Corticosteroids or intravitreal injections may be necessary in refractory disease. Early recognition and timely intervention are essential to preserve vision.

Conclusion

Irvine–Gass syndrome is a frequent yet often underestimated complication following cataract surgery. Although usually self-limiting, persistent cases can significantly impair vision. Regular postoperative follow-up and prompt management are critical to achieving optimal visual outcomes.

Article Publication Details

This article is published in the **Medora: Medical Sciences**, ISSN 3139-1400 (Online). In Volume 2 (2026), Issue 1 (January – March). The journal is published and managed by **Erudexa Publishing**.

Copyright © 2026, Authors retain copyright. Licensed under the Creative Commons Attribution 4.0 International License (CC BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. <https://creativecommons.org/licenses/by/4.0/> (CC BY 4.0 deed)

Acknowledgements

We sincerely thank the editors and the reviewers for their valuable suggestions on this paper.

Authors' contributions

All authors read and approved the final manuscript.

Data availability

No datasets were generated or analyzed during the current study.

Declarations

Ethics approval and consent to participate

Not applicable.

Funding

The authors declare that no funding was received for this work.

Competing interests

The authors declare that they have no competing interests.



References

- Grzybowski A., Sikorski B.L., Ascano F.J., Huerva V. Pseudophakic cystoid macular edema. *Clin. Interv. Ageing*. 2016;11:1221–1229. doi: 10.2147/CIA.S111761
- Irvine S.R. A newly defined vitreous syndrome following cataract surgery. *Am. J. Ophthalmol.* 1953;36:599–619. doi: 10.1016/0002-9394(53)90302-X
- Gass J.D., Norton E.W. Cystoid macular oedema and papilledema following cataract extraction. A fluorescein fundoscopic and angiographic study. *Arch. Ophthalmol.* 1966;76:646–661. doi: 10.1001/archopht.1966.03850010648005
- Irvine SR. A newly defined vitreous syndrome following cataract surgery; interpreted according to recent concepts of the structure of the vitreous; the Seventh Francis I. Proctor Lecture. *Am J Ophthalmol* 1953; 36:599-619.

Publisher's Note

ERUDEXA PUBLISHING remains neutral with regard to jurisdictional claims in published maps and institutional affiliations. The statements, opinions, and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of ERUDEXA PUBLISHING and/or the editor(s). ERUDEXA PUBLISHING disclaims responsibility for any injury to people or property resulting from any ideas, methods, instructions, or products referred to in the content.