

CASE REPORT

PEER REVIEWED | OPEN ACCESS

Delayed-onset iris prolapse 1-month following uncomplicated cataract surgery

Shrina Patel, Adam Dossey, Matthew Marshall

ABSTRACT

Introduction: Iris prolapse is a well-recognized complication of cataract surgery that typically occurs intraoperatively or in the immediate operative period. It results from a combination of predisposing risk factors, surgical technique and instruments, pharmacologic use, and patient-related behavioral factors such as eyelid squeezing and poor compliance with postoperative activity restrictions.

Case Report: A 69-year-old female presented to the clinic for a one-month postoperative follow-up after uncomplicated cataract surgery of the right eye (OD). The patient was subjectively asymptomatic but had noticed a “dark spot” on her globe, which was initially mistaken for cosmetic debris. Slit-lamp examination revealed a prolapse of iris tissue through the temporal corneal incision with associated peaked pupil. The patient returned to the operating room the next morning where the iris was repositioned, followed by intracameral air bubble insertion and placement of a temporal suture. Surgery was uncomplicated and visual acuity the following day had returned to 20/20.

Conclusion: Iris prolapse can present as a rare, asymptomatic late complication of cataract surgery. This case highlights the significance of longitudinal wound assessment and patient education regarding accidental ocular trauma, even after a seemingly stable early

postoperative course. Urgent surgical repair is necessary to prevent further complications, such as permanent iris necrosis, chronic pupillary distortion, or the development of endophthalmitis.

Keywords: Cataract surgery, Clear corneal incision, Delayed-onset, Iris prolapse

How to cite this article

Patel S, Dossey A, Marshall M. Delayed-onset iris prolapse 1-month following uncomplicated cataract surgery. J Case Rep Images Ophthalmol 2026;9(2):23–27.

Article ID: 100058Z17SP2026

doi: 10.5348/100058Z17SP2026CR

INTRODUCTION

Modern cataract surgery utilizes sutureless, small-incision phacoemulsification to maintain a stable anterior chamber, with randomized clinical trials demonstrating lower rates of surgical complications such as iris prolapse and posterior capsule rupture when compared to extracapsular cataract extraction or manual small-incision cataract extraction [1]. While this technique is the global standard, iris prolapse can still occur, most commonly through the main incision during hydrodissection in the presence of risk factors such as intraoperative floppy iris syndrome (IFIS); however, it can manifest during any surgical step, even in the presence of few to no predisposing factors [2].

While rare, one study found that postoperative iris prolapse can occur with 34% of cases identified on the first postoperative day and 86% of cases identified within the first two weeks postoperatively [3]. Late-onset prolapse occurring one month postoperatively with documented wound stability at all prior visits remains rarely documented in literature [4].

Shrina Patel¹, Adam Dossey², Matthew Marshall³

Affiliations: ¹BS, Medical Student, The University of Texas at Tyler School of Medicine, Tyler, Texas, USA; ²MD, Volunteer Community Faculty, The University of Texas at Tyler School of Medicine; Ophthalmologist, Heaton Eye Associates, Tyler, Texas, USA; ³OD, Optometrist, Heaton Eye Associates, Tyler, Texas, USA.

Corresponding Author: Shrina Patel, 3355 Earl Campbell Parkway, Tyler, TX 75701, USA; Email: spatel21@patriots.utttyler.edu

Received: 19 June 2026

Accepted: 27 July 2026

Published: 23 August 2026

CASE REPORT

A 69-year-old female with a past medical history of hypertension, hyperlipidemia, and ongoing tobacco use presented to clinic one month after uncomplicated phacoemulsification with single-piece multifocal intraocular lens (IOL). Postoperative week two physical examination demonstrated a well healing temporal corneal incision, deep and quiet anterior chamber, and a stable posterior chamber intraocular lens (PCIOL) was well centered within the capsular bag. Her ocular history was notable for chronic epiphora and right sided punctoplasty in 2017 as well as ocular hypertension in the left eye. The patient endorsed symptoms of dry eye bilaterally, with tearing in both eyes consistent with her prior history; however, she denied any visual changes, foreign body sensation, pain, conjunctival injection, or purulent drainage in either eye. Despite this, the patient denied any known ocular trauma or eye rubbing; however, she was uncertain if a minor accidental event or unconscious eye rubbing during the night could have occurred during the preceding days. She reported mild soreness in her right cheek earlier that day, which prompted her to look in the mirror. She observed a dark irregularity that she initially mistaken for cosmetic debris; however, a family member viewed it later that day and became concerned it was a clinical abnormality. At this visit, exam was stable from postoperative week two visit at 20/30 and intraocular pressure of 19 mmHg. Despite these stable clinical parameters, anterior segment examination of the right eye (OD) revealed prolapse of iris tissue at the 8 o'clock position through the temporal corneal incision with trace surface epithelialization and an associated peaked pupil (Figure 1). The anterior chamber was deep with 2–3+ cells with no evidence of hypopyon; PCIOL remained in good position. Fundoscopic examination was within normal limits with no clinical signs of posterior segment trauma, retinal detachment, or choroidal effusion.

The patient was immediately started on moxifloxacin every hour in the right eye, sent home with an eye shield with instructions for continuous wear until surgery, and underwent surgical reintervention the following morning. Despite the trace surface epithelialization and unknown duration of the prolapse, careful examination of the iris revealed highly viable, well-perfused tissue that was free of ischemic necrosis, significant atrophy or signs of infection. As a result, preservation of the iris tissue was elected over tissue excision. Surgery included repositioning of the iris, insertion of an intracameral air bubble, and suturing of the temporal wound with a single 10-0 nylon. The patient was instructed to continue moxifloxacin four times daily (QID) in the right eye for eight days and was started on prednisolone QID OD tapered over four weeks. She was seen in clinic on postoperative day one and reported a foreign body sensation with associated pain and pressure in the right

eye. She also endorsed photophobia and blurry vision in the right eye; uncorrected visual acuity was 20/40 and intraocular pressure (IOP) remained within normal limits at 18 mmHg. Examination revealed a well-apposed wound and a restored iris architecture with sectoral temporal atrophy and an air bubble present superiorly (Figure 2). There were no signs of re-prolapse, and the anterior chamber demonstrated 1+ cell without evidence of infection. The PCIOL remained in good position. The patient returned at one week postoperatively and endorsed light sensitivity OD but denied any pain or foreign body sensation. She endorsed dry eyes with associated visual changes, but uncorrected visual acuity remained stable at 20/40. Physical examination revealed a deep anterior chamber with no cells or flare, well-positioned suture, and iris atrophy temporally. The intraocular pressure was stable at 20 mmHg. The patient continued prednisolone and moxifloxacin OD as prescribed.



Figure 1: Iris prolapse one month following cataract surgery. Anterior segment photograph of the right eye demonstrating iris tissue incarcerated within the temporal corneal incision with associated corectopia.

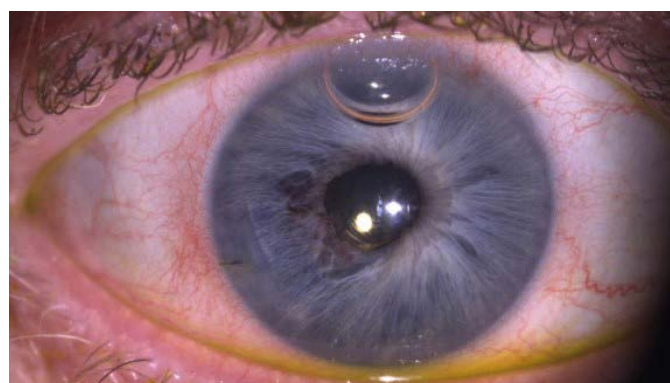


Figure 2: Postoperative day 1 appearance of the right eye. The iris prolapse has been repaired, and the pupil is now central and round. A superior air bubble is visible in the anterior chamber, placed for internal wound tamponade. Topical fluorescein stain was applied to assess wound integrity with Seidel testing, showing no signs of aqueous leakage.

DISCUSSION

Injury to the iris can cause a significant array of long-term issues ranging from chronic irritation, iris transillumination defects, iris sphincter injury, and unfavorable visual and cosmetic results such as mydriatic or irregular pupils [4]. In the setting of cataract surgery, iris prolapse is an uncommon complication but occurs most frequently in the setting of fluid velocity changes or abnormal iris tonicity: hydrodissection, suprachoroidal hemorrhage, shallow anterior chamber, convex iris configuration, posterior incision position, pharmacologic alpha-antagonist usage, or IFIS. Moreover, studies have found that light-colored irises tend to have a significantly increased risk of IFIS occurrence and severity when compared to dark-colored irises [5].

Intraoperative iris prolapse can be explained by the Bernoulli's principle, which describes the increase in the speed of fluid that occurs when nonviscous flow experiences a decrease in pressure [2]. The phacoemulsification incision can be poorly constructed, leading to a rapid outflow of aqueous humor and a sudden pressure drop in the anterior chamber, which creates a relative vacuum and potential for the iris to prolapse through the wound. If intraoperative iris prolapse occurs, management focuses on identifying the underlying cause and gently repositioning the tissue using an ophthalmic viscosurgical device (OVD) or a dedicated iris repositioner. Surgical options like a peripheral iridectomy (PI) remain a last resort to alleviate severe posterior-to-anterior chamber pressure gradients if pupillary block is suspected [6].

Uncommonly, subacute iris prolapse may occur from low-velocity aqueous leakage from the anterior chamber exceeding the aqueous entry; clinical findings often include shallowing of the anterior chamber with a decrease in the IOP [6]. Risk factors of postoperative iris prolapse include chronic obstructive pulmonary disease, likely due to the compounded effects of obesity and chronic cough leading to increased IOPs, unsutured clear corneal incision greater than 3.5 mm or unintended wound lengthening with OVD insertion, which can contribute to delayed wound healing and poor tensile strength, pressure or trauma to the eye, which lead to wound destabilization and prolapse even with small clear corneal incisions, and patients who are prone to falls or live in areas where resources or postoperative follow-up may be limited. As a result, patients must be advised to not rub their eyes and sleep with a protective eye shield for at least two weeks postoperatively [7]. Similarly, other mechanisms of transient IOP elevation such as sneezing, vomiting, or straining likely pose similar risk of wound dehiscence and subsequent iris prolapse. Several cases of traumatic iris loss through clear corneal incisions, ranging from two months to six years postoperatively, have been reported in the literature, indicating that while uncommon, corneal wound dehiscence can occur months

to years after surgery [8]. Management of postoperative iris prolapse should focus on first examining the tissue for signs of necrosis, severe trauma, or contamination and if present, the iris tissue should be removed and cultured to decrease risk of infection. In cases where surface epithelialization is present on the slit-lamp and cannot be removed, the iris tissue should also be excised to prevent epithelial ingrowth and the development of secondary glaucoma. If there are no signs of necrosis or infection and surface epithelialization is not present or has been completely removed, the iris may be safely repositioned back into the anterior chamber [7].

In our case, the patient's anterior chamber was deep, IOP had remained stable relative to the prior visit, and trace surface epithelialization was noted at the corneal incision site. These clinical findings suggest that the patient likely had delayed, subacute prolapse over 24 to 48 hours, with subsequent plugging of the incision due to incarceration of the iris tissue. Manual repositioning of the tissue was successful, and a single temporal suture was sufficient to ensure long-term wound stability and prevent recurrence.

Patients experiencing an iris prolapse typically present with symptoms such as increased tearing, photophobia, foreign body sensation, acute pain, or changes in visual acuity [9]. Interestingly, our patient was essentially asymptomatic despite frank wound dehiscence and tissue incarceration. It is possible that the patient's chronic epiphora masked symptoms of aqueous wound leakage, making it difficult for her to distinguish between physiological tearing and pathologic loss of anterior chamber fluid. This case also highlights the importance of considering systemic factors that may affect wound healing and tensile strength, emphasizing the value of thorough preoperative risk assessment and enhanced perioperative monitoring for patients with identified risk factors. Studies have shown that smoking cigarettes exposes corneal epithelial cells to chemicals that trigger an inflammatory and oxidative stress response, resulting in impaired proliferation, wound closure, and acceleration of apoptosis. External smoke exposure may also lead to chronic inflammation and exacerbation of dry eyes [10], which could increase risk of the patient rubbing the eyes and applying digital pressure in the postoperative period.

Because this case report focuses on a single patient's clinical course, the generalizability of these findings is limited. Additionally, while chronic tobacco use may have been a contributing factor to this patient's poor wound healing, silent nocturnal trauma or unrecognized digital pressure cannot be completely excluded as contributing triggers to her clinical presentation. Future studies with larger cohorts are required to more precisely identify the stability of clear corneal incisions in patients with multiple risk factors, ultimately guiding more standardized criteria for primary suture placement during initial cataract surgery.

CONCLUSION

Clear corneal incisions can remain vulnerable to poor wound healing and subsequent dehiscence several weeks after cataract surgery despite prior stable clinical parameters. The patient's medical and social history can leave them susceptible to the development of intraoperative and postoperative complications of cataract surgery and may work to mask the typical symptoms associated with iris prolapse. When tissue incarceration occurs, prompt surgical reintervention with secure suture placement provides the necessary tectonic reinforcement to stabilize the anterior chamber architecture and preserve long-term visual outcomes.

REFERENCES

1. Miller KM, Oetting TA, Tweeten JP, Carter K, Lee BS, Lin S, et al. Cataract in the adult eye preferred practice pattern. *Ophthalmology* 2022;129(1):P1–126.
2. Tint NL, Dhillon AS, Alexander P. Management of intraoperative iris prolapse: Stepwise practical approach. *J Cataract Refract Surg* 2012;38(10):1845–52.
3. Naylor G. Iris prolapse; Who? When? Why? *Eye (Lond)* 1993;7(Pt 3):465–7.
4. Szurman P. Iris complications and management in cataract surgery. In: Shajari M, Priglinger S, Kohnen T, Kreutzer TC, Mayer WJ, editors. *Cataract and lens surgery*. Cham: Springer; 2023. p. 397–406.
5. Safir M, Greenbaum E, Vardi MA, Friehman A, Pras E, Assia EL, et al. Iris color as a predictive factor for intraoperative floppy iris syndrome. *Graefes Arch Clin Exp Ophthalmol* 2023;261(12):3503–10.
6. Allan BD. Mechanism of iris prolapse: A qualitative analysis and implications for surgical technique. *J Cataract Refract Surg* 1995;21(2):182–6.
7. Menapace R. Delayed iris prolapse with unsutured 5.1 mm clear corneal incisions. *J Cataract Refract Surg* 1995;21(3):353–7.
8. Nguyen C, Ford R, Maurino C. Case report: External cystic epithelial ingrowth. *Cataract & Refractive Surgery Today Europe* 2010. [Available at: <https://crstodayeurope.com/topics/cataract-surgery/difficult-cases-case-report-external-cystic-epithelial-ingrowth/46317/>]
9. Sophocleous S. Doctor, where is my iris? *BMJ Case Rep* 2016;2016:bcr2016214957.
10. Giallongo S, Bellia F, Russo A, Fallico M, Polosa R, Castellino N, et al. Comparative evaluation of cigarette smoke and a heated tobacco product on corneal oxidative stress in an air/liquid interface model. *Invest Ophthalmol Vis Sci* 2025;66(4):4.

Acknowledgments

Artificial Intelligence (AI) Disclosure:

Generative AI technology (Google Gemini, May 2026 version, Google LLC) was utilized during the preparation of this manuscript. Specifically, the technology was used

to assist with grammatical editing and formatting of the literature citations within the manuscript text. The final clinical interpretation and critical content verification were performed entirely by the authors, who accept full accountability for the integrity and accuracy of the content.

Author Contributions

Shrina Patel – Conception of the work, Design of the work, Acquisition of data, Analysis of data, Interpretation of data, Drafting the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Adam Dossey – Conception of the work, Design of the work, Acquisition of data, Analysis of data, Interpretation of data, Drafting the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Matthew Marshall – Conception of the work, Design of the work, Acquisition of data, Analysis of data, Interpretation of data, Drafting the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Guarantor of Submission

The corresponding author is the guarantor of submission.

Source of Support

None.

Consent Statement

Written informed consent was obtained from the patient for publication of this article.

Conflict of Interest

Authors declare no conflict of interest.

Data Availability

All relevant data are within the paper and its Supporting Information files.

Copyright

© 2026 Shrina Patel et al. This article is distributed under the terms of Creative Commons Attribution License which permits unrestricted use, distribution and reproduction in any medium provided the original author(s) and original publisher are properly credited. Please see the copyright policy on the journal website for more information.

Access full text article on
other devices



Access PDF of article on
other devices





INTERNATIONAL JOURNAL OF
CASE REPORTS AND IMAGES



VIDEO JOURNAL OF
CLINICAL RESEARCH



VIDEO JOURNAL OF
BIOMEDICAL SCIENCE



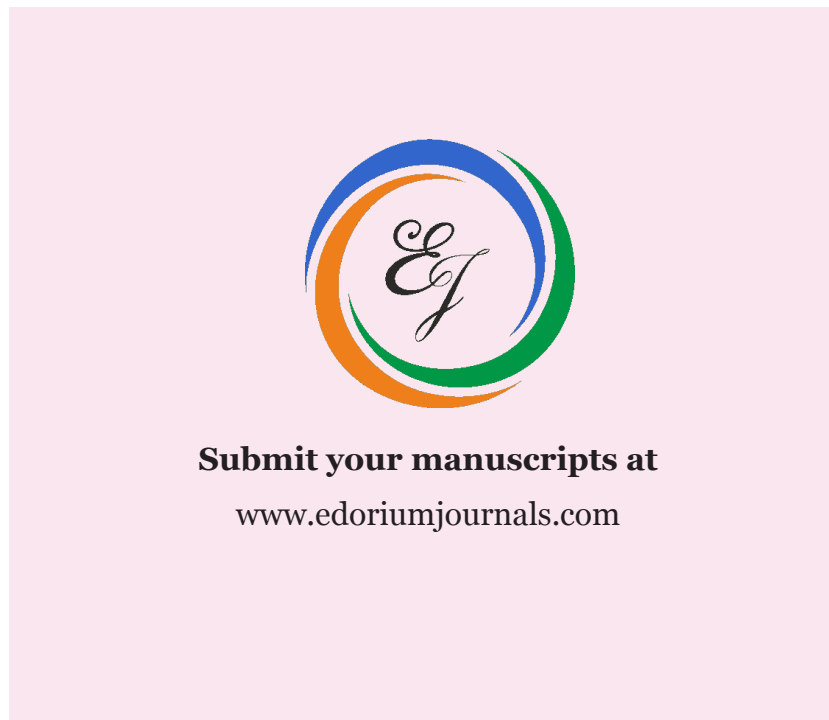
INTERNATIONAL JOURNAL OF
HEPATOBIILIARY AND
PANCREATIC DISEASES



INTERNATIONAL JOURNAL OF
BLOOD TRANSFUSION AND
IMMUNOHEMATOLOGY



EDORIUM JOURNAL OF
OPHTHALMOLOGY



EDORIUM JOURNAL OF
MEDICINE



EDORIUM JOURNAL OF
CARDIOTHORACIC AND
VASCULAR SURGERY



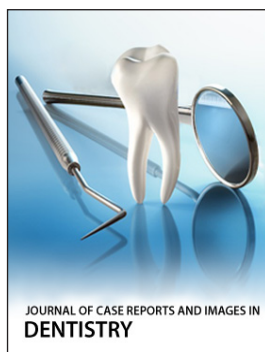
JOURNAL OF CASE REPORTS
AND IMAGES IN ORTHOPEDICS
AND RHEUMATOLOGY



EDORIUM JOURNAL OF
PSYCHOLOGY



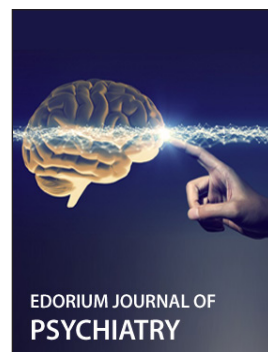
EDORIUM JOURNAL OF
CELL BIOLOGY



JOURNAL OF CASE REPORTS AND IMAGES IN
DENTISTRY



EDORIUM JOURNAL OF
CANCER



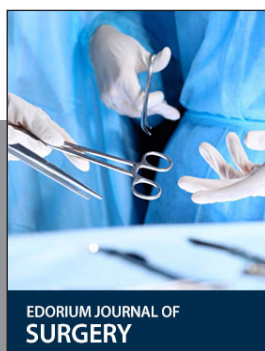
EDORIUM JOURNAL OF
PSYCHIATRY



JOURNAL OF CASE REPORTS AND
IMAGES IN INFECTIOUS DISEASES



EDORIUM JOURNAL OF
ANATOMY AND EMBRYOLOGY



EDORIUM JOURNAL OF
SURGERY



JOURNAL OF CASE REPORTS
AND IMAGES IN PATHOLOGY



EDORIUM JOURNAL OF
ANESTHESIA