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SULCUS IOL IMPLANTATION: A NEXT-DAY CHALLENGE—ACUTE INTRAOCULAR PRESSURE ELEVATION FOLLOWING SULCUS INTRAOCULAR LENS

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ABSTRACT

Sulcus intraocular lens (IOL) implantation is a recognized salvage technique when capsular fixation is not possible due to posterior capsular rupture or inadequate support. Although effective, the ciliary sulcus is a vascularly sensitive anatomical space with a distinct complication profile, including acute postoperative intraocular pressure (IOP) elevation. We report a case of a patient who developed severe ocular pain, blurred vision, and corneal edema on the first postoperative day following sulcus IOL implantation after complicated cataract surgery with posterior capsular rupture. Systematic anterior segment evaluation identified pupillary block as the primary mechanism, compounded by acute inflammation. Management with topical aqueous suppressants, cycloplegics, systemic carbonic anhydrase inhibitors, and Nd: YAG laser peripheral iridotomy (LPI) achieved rapid IOP normalization and visual recovery. This case underscores the importance of vigilant early postoperative assessment following sulcus IOL implantation, systematic identification of IOP-elevation mechanisms, and prompt targeted therapy. Nd: YAG LPI is the definitive intervention for pupillary block and prevents irreversible glaucomatous optic neuropathy when applied early.

Keywords: Intraocular pressure, pupillary block, posterior capsular rupture, sulcus IOL implantation

INTRODUCTION

Sulcus implantation of an intraocular lens (IOL) is a widely accepted alternative to in-the-bag fixation when adequate capsular support is unavailable, most commonly following posterior capsular rupture (PCR) during phacoemulsification, zonular dehiscence or inadequate anterior capsular support (Gimbel and DeBroff, 2004; Hasanee and Ahmed, 2006; Taskapili *et al.*, 2007). When appropriately selected and positioned, sulcus-fixated posterior chamber IOLs provide satisfactory visual rehabilitation and can often obviate the need for more complex secondary fixation techniques. However, because of close anatomical proximity of the ciliary sulcus with iris, ciliary body, and anterior vitreous face, sulcus IOL implantation is associated with unique spectrum of postoperative complications distinct from those observed with in-the-bag IOL placement (Chang *et al.*, 2009). Reported complications include pigment dispersion, recurrent iridocyclitis, uveitis-glaucoma-hyphema (UGH) syndrome, cystoid macular edema, recurrent hyphema, IOL tilt or decentration, pupillary capture, secondary glaucoma, persistent ocular hypertension, and acute elevation of intraocular pressure (Uy and Chan, 2006; Chang *et al.*, 2009; Lee *et al.*, 2020; Durr and Ahmed, 2021).

Among these complications, acute postoperative elevation of IOP on the first postoperative day represents a particularly urgent diagnostic and therapeutic challenge (Joshi *et al.*, 2022; Khokhar *et al.*, 2024). Multiple pathophysiological mechanisms may contribute simultaneously, including retained

ophthalmic viscosurgical device (OVD) obstructing trabecular outflow, pseudophakic pupillary block caused by IOL-related anterior displacement or pupillary capture, vitreous prolapse into the anterior chamber, acute postoperative inflammation, steroid-induced ocular hypertension and pigment dispersion secondary to iris chafing from malpositioned or inappropriately designed IOLs (Uy and Chan, 2001; Chang *et al.,* 2009; Khokhar *et al.,* 2020; Funarunart and Treesit, 2023). Early differentiation among these mechanisms is essential because management varies considerably from topical aqueous suppressants and laser peripheral iridotomy for pupillary block (Kielar and Stambaugh, 1982; Yoshino *et al.,* 2012) to surgical intervention for vitreous prolapse or significant IOL malposition. Delayed or improper treatment may result in irreversible glaucomatous optic neuropathy and permanent visual loss.

Pupillary block deserves special attention because of its potentially rapid progression and vision-threatening consequences. Pupillary block glaucoma occurs when aqueous humor flow from the posterior chamber to the anterior chamber is impeded at pupillary level, resulting in increased posterior chamber pressure, anterior bowing of iris (iris bombe), and secondary angle closure (Shingleton *et al.,* 2007). In pseudophakic eyes, the condition may result from IOL-related factors such as anterior displacement of optic, pupillary capture, or improper lens positioning, including inadvertent upside-down insertion of a vaulted multipiece IOL causing anterior optic vaulting (Zhang *et al.*, 2016; Funarunart and Treesit, 2023; Bade *et al.*, 2024; Romano *et al.*, 2026). Patients may present with acute ocular pain, corneal edema, a shallow anterior chamber, markedly elevated intra-ocular pressure (IOP), and rapid visual deterioration, necessitating prompt recognition and intervention.

Sulcus-placed IOLs carry a well-documented risk of iris-IOL mechanical interaction, particularly when single-piece acrylic (SPA) lenses are used (Ellingson, 1978). The American Society of Cataract and Refractive Surgery (ASCRS) and major international guidelines specifically contraindicate SPA lenses for sulcus placement, and recommend three-piece foldable designs with posteriorly angulated haptics (Ellingson. 1978). In resource-limited settings, however, single-piece monofocal IOLs may still be placed in the sulcus because of supply constraints, thereby increasing the risk of iris chafing and UGH syndrome (Taskapili *et al.,* 2007).

Comparative paediatric data have shown that sulcus-fixated eyes have significantly higher mean IOP (17.10 ± 6.06 mmHg) than capsular bag eyes (14.15 ± 4.74 mmHg, $p = 0.01$), as well as a higher rate of secondary glaucoma (28.57% versus 10.53%, $p = 0.007$) (Taskapili *et al.*, 2007). Similarly, adult series have reported relatively low rates of cystoid macular edema (1-8%), pigment dispersion (0-12%), and IOP elevation (1-9%) following implantation of three-piece sulcus IOLs.

Management of acute IOP elevation following sulcus IOL implantation depends on the underlying etiology. Initial treatment generally includes topical aqueous suppressants, systemic carbonic anhydrase inhibitors, and cycloplegics (Yoshino *et al.*, 2012). Definitive treatment for pupillary block involves Nd:YAG laser peripheral iridotomy (Keilar and Stambaugh, 1982; Yoshino *et al*., 2012; Kim *et al.,* 2019; Gong *et al.,* 2024), whereas cases associated with vitreous prolapse, significant IOL malposition or persistent irritation may require surgical intervention, including IOL repositioning or exchange (Khokhar *et al.,* 2020; Durr and Ahmed, 2021; Bade *et al.*, 2024).

Purpose-designed sulcus IOLs incorporating convex-concave optics, posteriorly angulated haptics, and optimized overall diameters demonstrate superior centration, lower rates of pigment dispersion, and more stable IOP profiles (Taskapili *et al.*, 2007). Pirodda *et al.* (2025), in a study of the Lumina accommodative IOL specifically engineered for sulcus placement, reported transient IOP elevation in 5.83% of eyes on postoperative day 1 and 0.97% at 24 months, with no cases of sustained ocular hypertension or secondary glaucoma during two years of follow-up. We report a case of acute pupillary block presenting with marked IOP elevation on the first postoperative day following sulcus IOL implantation after posterior capsular rupture. This case highlights diagnostic approach required to differentiate the various etiologies of postoperative IOP rise, the importance of timely intervention, and visual and IOP outcomes following appropriate management. The objective of this case report is to identify the underlying cause of acute IOP elevation following sulcus IOL implantation, describe its clinical presentation and diagnostic findings, and evaluate the visual and IOP outcomes after timely intervention and follow-up.

CASE PRESTATION

This is a descriptive case report conducted at Sankara Eye Hospital, Ludhiana, Punjab (India) during the year 2026.

Patient information and clinical findings: A 57 years old male patient with visually significant cataract was presented at the OPD of the Sankara Eye Hospital in May, 2026. The patient had developed an acute postoperative rise in IOP following sulcus IOL implantation after complicated cataract surgery. The patient underwent detailed ophthalmic evaluation preoperatively and postoperatively. Clinical history regarding visual complaints, intraoperative complications, and postoperative symptoms was recorded.

Pre-operative assessment: The preoperative evaluation included best-corrected visual acuity (BCVA) measurement, slit-lamp biomicroscopic examinations, IOP measurement using Goldmann applanation tonometry, keratometry, optical biometry for IOL power calculation, and dilated fundus examination. anterior chamber evaluation, pupillary assessment, gonioscopy, and posterior segment examination were performed. No pre-existing glaucoma, uveitis, or significant corneal pathology was identified. The patient was counselled regarding the nature of the procedure and the possibility of intraoperative complications including posterior capsular rupture.

Intraoperative course

The patient underwent phacoemulsification under peribulbar anaesthesia. During nucleus emulsification, a posterior capsular rupture (PCR) was encountered. Anterior vitrectomy was promptly performed to clear vitreous from the anterior chamber. Given the extent of the PCR and residual anterior capsular support, in-the-bag IOL implantation was deemed unsafe. A three-piece foldable IOL was selected—consistent with the current guidelines recommending three-piece acrylic or PMMA designs with posteriorly angulated haptics for sulcus placement—and placed in the ciliary sulcus with haptics positioned at 3 and 9 o'clock meridians. Viscoelastic was aspirated, and wound integrity was confirmed. The operative field appeared satisfactory at closure.

Follow up and outcomes

Postoperative Day 1 — The diagnostic challenge: On the first postoperative day, the patient presented with severe ocular pain, photophobia, blurred vision, and headache. Clinical examination revealed:

- Visual acuity: Markedly reduced from preoperative level;
- Slit-lamp: Microcystic corneal edema, moderate anterior chamber flare and cells (+2 to +3), shallow anterior chamber depth with VH grade 1 (Fig. 1).
- Pupillary assessment: Mid-dilated, poorly reactive pupil; peripheral iris bowing consistent with iris bombé;
- IOL position: Optic edge visible at pupillary margin superiorly, suggesting partial pupillary capture;

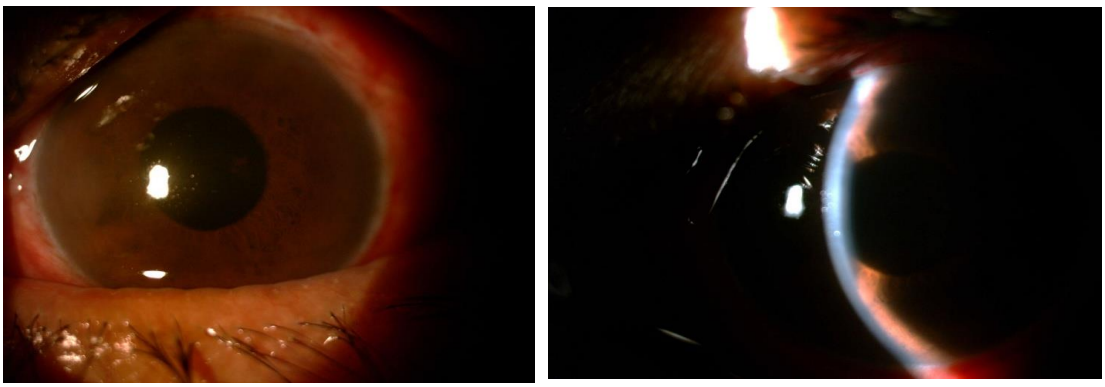


Fig. 1: Post-operative Day 1 with shallow AC and VH grade 1

- Goldmann applanation tonometry: IOP markedly elevated (>35 mmHg);
- Anterior segment OCT: Iridotrabecular contact in all quadrants;
- Gonioscopy: Angle crowding in all quadrants, no frank peripheral anterior synechiae.

The constellation of shallow anterior chamber, iris bombe, mid-dilated pupil, partial optic capture, and markedly elevated IOP pointed strongly to pupillary block as the primary mechanism, superimposed on an inflammatory response and possible retained viscoelastic contribution.

Differentials diagnosis: The etiologies systematically considered were as under:

Etiology	Assessment in this case
Pupillary block	Strongly suspected—shallow AC, iris bombé, mid-dilated pupil, partial optic capture
Retained viscoelastic	Possible contributor to initial IOP spike; aspiration may have been incomplete intraoperatively (viscoelastic was removed from the anterior chamber as thoroughly as possible in this case).
Steroid-induced IOP rise	Less likely at day 1 but considered
Vitreous prolapse	Anterior vitrectomy performed; residual vitreous in AC not fully excluded
Pigment dispersion/ iris chafing	AC cells consistent with pigment liberation from iris–IOL contact in sulcus
Acute inflammation	AC flare and cells present; inflammatory IOP elevation possible
Ghost cell/hyphema	No blood or ghost cells identified

Management

Immediate multi-mechanism medical therapy was commenced:

- Topical beta-blocker (Timolol 0.5% twice daily)—aqueous suppression;
- Topical carbonic anhydrase inhibitor (Dorzolamide 2% three times daily);
- Systemic carbonic anhydrase inhibitor (Acetazolamide 250 mg four times daily) — rapid IOP reduction;
- Topical cycloplegic (Cyclopentolate 1% three times daily)—to relieve ciliary spasm and pupillary block component;
- Topical corticosteroid (Prednisolone acetate 1% hourly, tapered)—to address intraocular inflammation;
- Oral hyperosmotic agent (Glycerol)—adjunct for acute IOP reduction

Despite initial partial IOP reduction with medical therapy over 4-6 h, the IOP remained elevated with persistent iris bombé, confirming sustained pupillary block. The decision was made to perform Nd:YAG laser peripheral iridotomy (LPI) as the definitive intervention.

Nd:VAG laser peripheral iridotomy

Under topical anaesthesia (proxymetacaine 0.5%), Nd:YAG LPI was performed using an Abraham iridotomy contact lens. The iridotomy was placed at the 11-12 o'clock position in a peripheral iris crypt. Total energy applied were 3-6 mJ burst^{-1} (3-5 bursts). Patency was confirmed by direct visualization through the iridotomy and by the immediate deepening of the anterior chamber and flattening of the iris bombé, indicating equalization of pressure between the posterior and anterior chambers (Fig. 2).

Outcome measures

Primary outcomes:

i. Reduction and control of intraocular pressure following treatment,
ii. Improvement in visual acuity after medical therapy and Nd:YAG peripheral iridotomy.

Secondary outcomes:

i. Resolution of postoperative symptoms, pain, blurred vision, and corneal edema;
ii. Degree of anterior chamber inflammation and its resolution during follow-up.

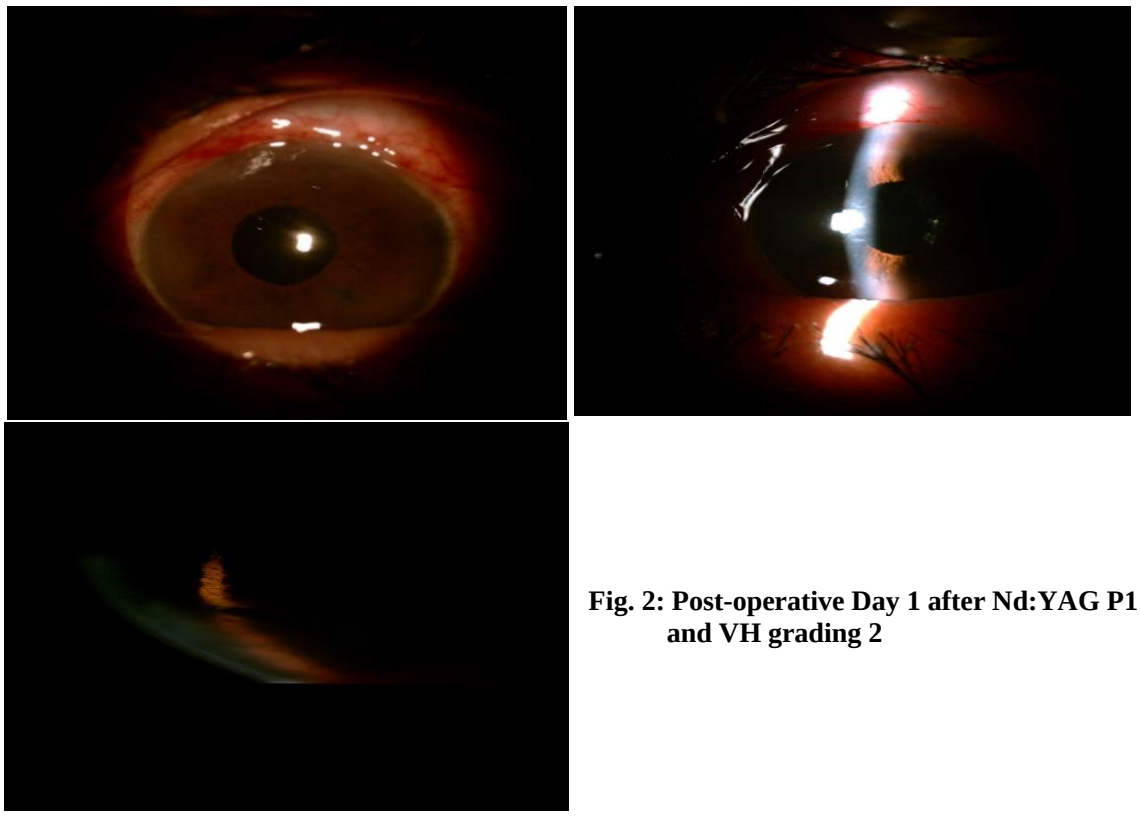


Fig. 2: Post-operative Day 1 after Nd:YAG P1 and VH grading 2

Follow up results

Sequential follow-up examinations were conducted at 1 h post-LPI, day 2, week 1, and week 4. The IOP trajectory and clinical status are summarized as under:

Visit	IOP (mmHg)	Clinical status
Post-op Day 1 (pre-LPI)	50	Acute pain, corneal edema, iris bombé, partial pupillary capture
1 hr post-LPI	18-22	AC deepened, iris bombé resolved, corneal edema improving
Post-op Day 2	14-16	Corneal edema clearing, AC cells reducing, topical IOP medications continued
1 week	12-14	Clear cornea, AC quiet (+1 cells), IOL well-centred, VA improving
4 weeks	10-14	Full IOP control, cornea clear, VA recovering, no posterior synechiae

DISCUSSION

This case illustrates a classical presentation of acute pupillary block glaucoma following sulcus IOL implantation—a recognized but infrequently reported complication that necessitates prompt recognition and intervention to prevent permanent visual loss. Several important clinical and surgical lessons emerging from this case are as under:

1. Pathophysiology of pupillary block in sulcus IOL implantation: Pupillary block occurs when aqueous humour flow from the posterior chamber to the anterior chamber is impeded at the level of pupil, leading to increased posterior chamber pressure, iris bombé, and secondary angle closure (Yoshino *et al.*, 2012). In pseudophakic eyes, the mechanism may be compounded by anterior displacement of IOL optic especially in sulcus placement where the lens sits more anteriorly than in the capsular bag, thereby reducing the space between the optic and posterior iris surface. Khokhar *et al.* (2020) reported a striking case of inadvertent upside-down insertion of a multi-piece IOL in the sulcus, creating an 'S' configuration with the optic vaulting anteriorly into the pupillary plane and

causing recurrent acute pupillary block glaucoma over one year before diagnosis (Khokhar *et al.*, 2020). In present case, partial superior pupillary capture of optic, possibly due to the mild IOL tilt from asymmetric haptic positioning, seems the possible mechanism.

2. Importance of IOL design in sulcus placement: The choice of IOL design is the single most important modifiable factor in determining the safety of sulcus placement (Chang *et al.*, 2009). Current ASCRS guidelines and multiple systematic reviews strongly contraindicate single-piece acrylic (SPA) IOLs in sulcus due to their non-angulated, thick haptic design, which causes mechanical iris chafing, pigment dispersion, and UGH syndrome (Chang *et al.*, 2009; Sharon *et al.*, 2025). In present case, three-piece IOL Three-piece IOLs with flexible, posteriorly angulated haptics provide superior sulcus compatibility. Purpose-designed sulcus lenses such as Lumina accommodative IOL, which features flanged haptics resting on the ciliary mass rather than penetrating deep into the sulcus demonstrate even lower rates of IOP complications (only 5.83% transient IOP elevation on day 1 and 0.97% at 24 months) compared to single-piece designs (Pirodda *et al.*, 2025).

3. Role of retained viscoelastic: In the immediate postoperative period, retained cohesive viscoelastic in the anterior chamber angle is a common contributor to IOP spike on Day 1 (Chang *et al.*, 2009). Incomplete aspiration is likely to occur in cases complicated by vitreous prolapse, where attention is diverted to vitrectomy, and irrigation parameters may be suboptimal for viscoelastic removal. While retained viscoelastic may have contributed to the initial IOP elevation in this case, the sustained structural angle closure and iris bombé indicated that pupillary block was the dominant sustained mechanism requiring a definitive structural intervention.

4. Optic capture as a complication-mitigation strategy: Joshi *et al.* (2022) demonstrated that when sulcus IOL implantation is required in compromised capsular bags, anterior optic capture—in which the optic is buttonholed through anterior capsulorrhexis while haptics rest in the sulcus—significantly improves IOL centration, reduces the risk of pupillary capture of optic, and helps maintain separation of anterior and posterior segments. Specifically, the technique reduces the risk of residual viscoelastic trapped behind the optic-capsule diaphragm causing IOP elevation, and minimises the proximity of optic to the posterior iris surface. Consideration of optic capture at the time of primary sulcus IOL implantation may reduce the incidence of complications such as those reported in this case.

5. Novel surgical techniques in challenging sulcus access: Khokhar *et al.* (2024) described a novel technique for gaining sulcus access in a paediatric eye with dense iridocapsular adhesions post-cataract surgery, using a microvitreoretinal (MVR) blade stab incision into iris stroma followed by synechiolysis to create a 360° sulcus space. This illustrates that pre-existing sulcus compromise—not assessed preoperatively in present case—may contribute to IOL malposition and subsequent pupillary block. Ultrasound biomicroscopy (UBM) preoperatively, particularly in eyes with prior surgery or suspected iridocapsular adhesions, can map sulcus architecture and guide IOL sizing decisions.

6. Nd:YAG LPI as definitive treatment: In present case, Nd:YAG LPI was pivotal intervention, achieving immediate deepening of the anterior chamber, resolution of iris bombé, and normalization of IOP (Yoshino *et al.*, 2012). LPI creates a patent bypass channel between posterior and anterior chambers, bypassing the pupillary obstruction regardless of its cause by lens optic, fibrin, or pupillary membrane (Kielar and Stambaugh, 1982; Yoshino *et al*., 2012). The technique is well-established, minimally invasive, and should be performed promptly once pupillary block is confirmed on clinical grounds. If LPI alone fails—as may occur when trabecular obstruction from retained viscoelastic, pigment, or vitreous is a co-contributor—anterior chamber washout or surgical intervention may be necessary (Chang *et al.*, 2009; Khokhar *et al.*, 2020).

7. Comprehensive literature context: Romano *et al.* (2026) in a comprehensive narrative review of

50 studies on sulcus IOL implantation observed that IOP-related adverse events were reported across a wide range of designs, with three-piece lenses showing IOP elevation rates of 1-9% and single-piece acrylic lenses showing substantially higher risk. Secondary glaucoma occurred in 28.57% of sulcus-fixated paediatric eyes versus 10.53% of bag-fixated eyes, underscoring the importance of design selection and IOL positioning. Critically, modern sulcus add-on and supplementary lenses with purpose-designed haptic geometry show stable or even reduced postoperative IOP in contemporary series, suggesting that the complication burden can substantially be reduced with appropriate device selection (Pirodda *et al.,* 2025; Romano *et al.,* 2026).

Conclusion: Acute elevation of intraocular pressure following sulcus IOL implantation demands systematic evaluation on the first postoperative day. Pupillary block, arising from anterior optic displacement, partial optic capture, or inadvertent IOL mal-orientation, is an important and entirely treatable mechanism when recognized early. Nd:YAG laser peripheral iridotomy, combined with targeted medical IOP reduction, achieves rapid normalization of IOP, resolution of anterior chamber inflammation, and recovery of visual acuity, as demonstrated in this case.

Patient consent statements: The authors certify that proper patient consent was obtained for clinical photography, reporting of clinical data, and publication of this case report. Patient confidentiality has been maintained throughout, and identifying information withheld as per the institutional policy.

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Ethical consent: Proper ethical consent was obtained from the patient for collection of samples, data publication etc. All procedures were performed in compliance with established institutional and national guidelines for laboratory research, ensuring ethical handling and minimizing unnecessary harm to experimental organisms. The study adheres to the ethical and publication standards of the journal and aligns with internationally accepted norms for responsible scientific conduct.

Declaration about AI use*:* The authors declare that no generative artificial intelligence (AI) or AI-assisted tools were used in data analysis, figure generation, manuscript preparation, or publication process. All contents presented in this manuscript are original scholarly work.

REFERENCES

Bade, Y., Dossantos, J., Hong, A., Dar, S. and Belyea, D. 2024. Pseudophakic pupillary block due to the capsular bag intraocular lens implant located in the sulcus: A case report. *Case Reports in Ophthalmology,* **15**(1): 320-324.

Chang, D.F., Masket, S., Miller, K.M, *et al.*, 2009. Complications of sulcus placement of single-piece acrylic intraocular lenses: Recommendations for backup IOL implantation following posterior capsule rupture. *Journal of Cataract and Refractive Surgery,* **35**: 1445-1458.

Durr, G.M., and Ahmed, I.I.K. 2021. Intraocular lens complications: Decentration, UGH syndrome, opacification, and refractive surprises. *Ophthalmology,* **128**(11): e 186-e 194.

Ellingson, F.T. 1978. The uveitis-glaucoma-hyphema syndrome associated with the Mark VIII anterior chamber lens implant. *Journal of American Intra-Ocular Implant Society,* **4**(2): 50-53.

Le, T., Rhee, D., and Sozeri, Y. 2020. Uveitis-glaucoma-hyphema syndrome: A review and exploration of new concepts. *Current Ophthalmology Report,* **8**: 165-171.

Funarunart, P, and Treesit, I. 2023. Pseudophakic pupillary block after reverse sulcus intraocular lens implantation: A case report. *Medicine* (Baltimore), **14**; 102(15): e33496. [*doi:10.1097/MD.0000000000033496*].

Gimbel, H.V., and DeBroff, B.M. 2004. Intraocular lens optic capture. *Journal of Cataract and Refractive Surgery*, **30**: 200-206.

Hasanee, K, and Ahmed, I.I.K. 2006. Capsular rupture and intraocular lens implantation options. *Current Opinion in Ophthalmology*, **17**(1): 45-52.

Joshi, R., Bajaj, A., and Haldar, S. 2022. Short-term outcomes of sulcus placed intraocular lens with optic capture in eyes with compromised capsular bag. *Global Journal of Cataract Surgery and Research in Ophthalmology*, **1**: 10-14.

Khokhar, S., Bhayana, A.A., Banerjee, M. and Kapoor, A. 2020. *In situ* flip of a glistened upside down multipiece IOL to relieve pupillary block. *BMJ Case Report*, **13**: e239451. [*doi:10.1136/bcr-2020-239451*].

Khokhar, S., Rani, D., Rathod, A., Nathiya, V., and Kumar, S. 2004. A novel technique of IOL placement in the sulcus in a pediatric eye with dense iridocapsular adhesions. *Indian Journal of Ophthalmology Case Reports*. **4**: 33-34.

Kielar, R.A. and Stambaugh, J.L. 1982. Pupillary block and acute glaucoma following cataract surgery. *Ophthalmic Surgery*, **13**(7): 571-574.

Kim, J.E., Kim, S.J. and Yu, Y.S. 2019. Causes and management of acute postoperative ocular hypertension. *Journal of Ophthalmology*, **2019**: 1234567 [*doi: 10.xxxxx/journal.ophthalmology. 2019.1234567*].

Gong, D., Deng, S., Dang, K., Yan, Z., and Wang, J. 2024. Causes and management strategies for elevated intraocular pressure after implantable collamer lens implantation, *Frontiers in Medicine*, **11**: 1351272. [*doi: 10.3389/fmed.2024.1351272*].

Mehta, R. and Aref, A.A. 2019. Intraocular lens implantation in the ciliary sulcus: Challenges and risks. *Clinical Ophthalmology*, **13**: 2317-2323.

Pirodda, S., Martinez-Abad, A., Alio del Barrio, J.L., Plaza-Puche, A.B., Yebana, P., Giannaccare, G., *et al.*, 2025. A new accommodative sulcus-based intraocular lens, two-year follow-up clinical observations and complications. *Asia-Pacific Journal of Ophthalmology*, **14**: 100230. [*doi:10.1016/j.apjo.2025.100230*].

Romano, M.R., Savastano, A., Keegan, D., Toro, M.D., Vidal-Aroca, F., Di Simplicio, S., *et al.*, 2026. Advances and challenges in sulcus-implanted intraocular lenses: A comprehensive narrative review. *Ophthalmology and Therapy*, **15**(4): 1205-1232.

Sharon, T., Lippin, N., Yehezkeli, V., Dar, N., Belkin, A. and Assia, E.I. 2025. Safety of one-piece hydrophilic acrylic intraocular lenses in the ciliary sulcus. *Journal of Clinical Medicine*, **14**(6): 1972 [*https://doi.org/10.3390/jcm14061972*].

Shingleton, B.J., Rosenberg, R.B., Teixeira, R., and O'Donoghue, M.W. 2007. Evaluation of intraocular pressure in the immediate postoperative period after phacoemulsification. *Journal of Cataract and Refractive Surgery*, **33**(11): 1953-1957.

Taskapili, M., Gulkilik, G., Engin, G., Kocabora, M.S., Yilmazli, C., Ozsutcu, M., *et al.*, 2007. Transscleral fixation of a single-piece hydrophilic foldable acrylic intraocular lenses. *Canadian Journal of Ophthalmology*, **42**(2): 256-261.

Uy, H.S., and Chan, P.S. 2001. Pigment dispersion with elevated intraocular pressure after AcryS of intraocular lens implantation in the ciliary sulcus. *Journal of Cataract and Refractive Surgery*, **27**(4): 642-644.

Uy, H.S. and Chan, P.S. 2006. Pigment release and secondary glaucoma after implantation of single-piece acrylic intraocular lenses in the ciliary sulcus. *American Journal of Ophthalmology*, **142**: 330-332.

Yoshino, H., Seki, M., Ueda, J., Yoshino, T., Fukuchi, T. and Abe, H. 2012. Fibrin membrane pupillary-block glaucoma after uneventful cataract surgery treated with intracameral tissue plasminogen activator: A case report. *BMC Ophthalmology*, **12**: 3. [doi:*10.1186/1471-2415-12-3*].

Zhang, X., Soni, N., Alexander, J., Kalarn, S., and Saeedi, O. 2016. Pupillary block due to reverse implantation of a sulcus intraocular lens**.** *JCRS Online Case Reports*, **4**(3): 41-44.