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Diagnostic Pitfall: Capsular Bag Distension Syndrome Presenting with Sudden Visual Deterioration

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Abstract **Case Report**

Capsular Bag Distension Syndrome (CBDS) is a rare complication of cataract surgery. It is characterized by the accumulation of fluid, retained material, or viscoelastic substances in the capsular bag, causing a space between the intraocular lens (IOL) and the posterior capsule. We report a case of sudden decrease in visual acuity with gradual worsening in a patient with late-onset CBDS. A 73-year-old woman experienced a sudden decrease in visual acuity and gradual worsening in her left eye approximately 10 years after undergoing bilateral cataract surgery. Before ophthalmic evaluation, any sudden sight or life-threatening disease was ruled out by neurological and rheumatological evaluation. Slit-lamp examination and anterior optic coherence tomography (OCT) revealed late-onset CBDS and Nd:YAG laser posterior capsulotomy was performed. Late-onset CBDS cases may experience sudden decreased visual acuity, which is hypothesized to occur when the trapped fluid becomes voluminous enough to shift the lens position just enough for it to the point of being symptomatic.

Keywords: Capsular bag distension syndrome, case report, cataract surgery, complications, capsulotomy.

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INTRODUCTION

Capsular Bag Distension Syndrome (CBDS) is a rare complication following cataract surgery, characterized by the accumulation of fluid, retained material, or viscoelastic substances within the capsular bag, resulting in a space between the intraocular lens (IOL) and the posterior capsule. This condition was initially described in 1990 [1] and has been reported in as few as 1% of post-cataract surgery eyes [2]. Patients typically present with decreased vision, glare sensitivity, or a myopic shift. The onset of CBDS can vary widely, occurring days, months, or even years after surgery, with one study documenting an incidence up to 33 years postoperatively [3].

Diagnosis is established through slit-lamp biomicroscopy and anterior segment optical coherence tomography (OCT), which reveal separation between the IOL and posterior capsule accompanied by capsular distension. The primary treatment modality is neodymium-yttrium-aluminum-garnet (Nd:YAG) laser posterior capsulotomy, facilitating drainage of the entrapped fluid, material, or viscoelastic substance.

We present a rare case of a patient who remained asymptomatic for almost ten years post-surgery before experiencing sudden blurriness with gradual worsening over one month in a single eye. Following Nd:YAG laser posterior capsulotomy, the patient's vision returned to baseline, with an abrupt improvement noted.

CASE REPORT

A 73-year-old female was evaluated in a neuro-ophthalmology clinic for decreased visual acuity in the left eye persisting for approximately five weeks. The patient reported a sudden blurriness with gradual decline in vision over this period, with symptoms stabilizing in the preceding three weeks. Her ocular history was significant for bilateral phacoemulsification performed at an outpatient clinic in 2018. The patient reported no complications during or after cataract surgery.

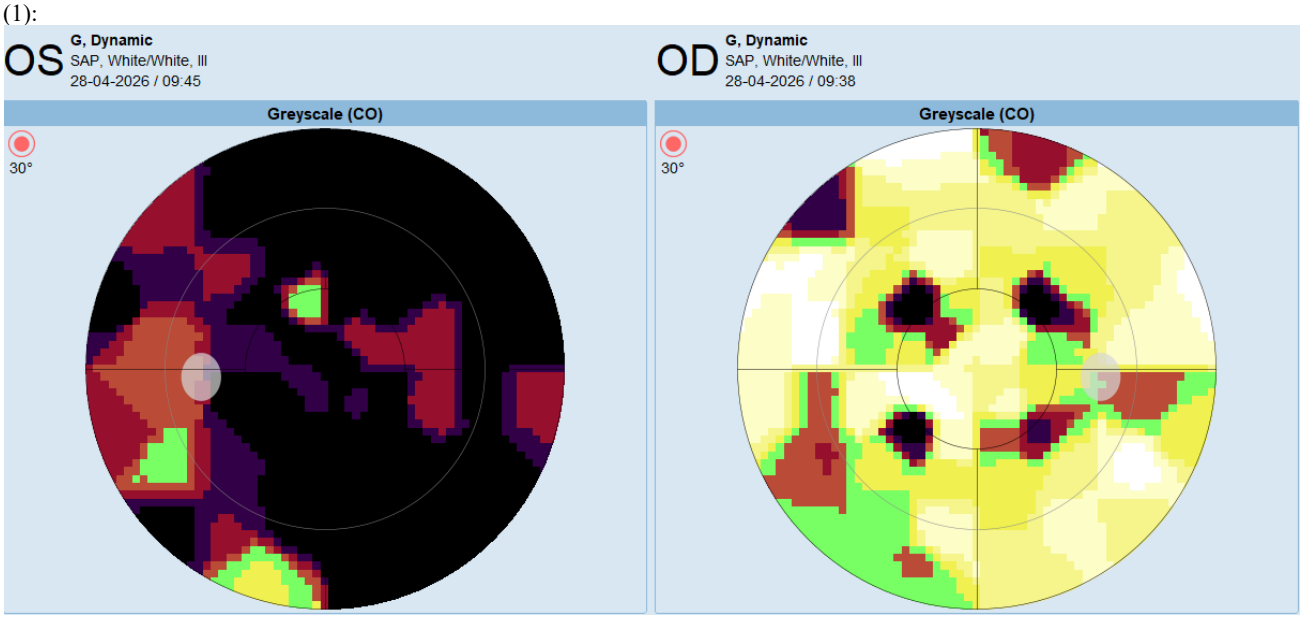
Prior to ophthalmic evaluation, the patient underwent extensive investigations by rheumatology and neurology specialists due to suspicion of giant cell arteritis, prompted by a prior diagnosis of polymyalgia rheumatica and associated scalp pain. Laboratory assessments, including C-reactive protein (CRP),

thrombocyte count, and temporal artery ultrasound, were within normal limits, effectively excluding giant cell arteritis. Neurological evaluations, including brain and orbit magnetic resonance imaging (MRI), were unremarkable.

At initial neuro-ophthalmology assessment, approximately five weeks post-symptom onset, the patient reported persistent visual impairment in the left eye. Examination revealed a normal intraocular pressure (IOP) and a visual acuity of 20/20 in the right eye and 20/60 in the left eye, without a relative afferent pupillary defect (RAPD). Automated perimetry using EyeSuite Octopus (Haag-Streit) demonstrated a normal visual field in the right eye and near-complete visual field loss in the left eye (Figure 1). Refraction at this time was as follows:

Eye	Spherical	Cylinder	Axis
Right	-0.25	-2.25	103
Left	Could not be measured		

(1):



(2):

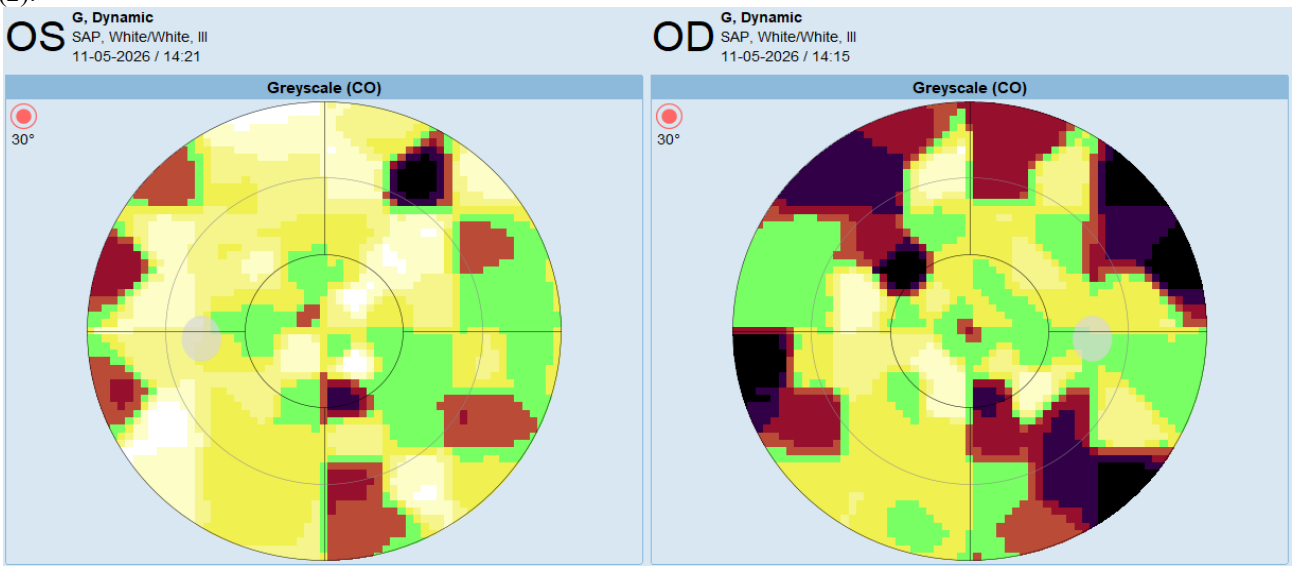
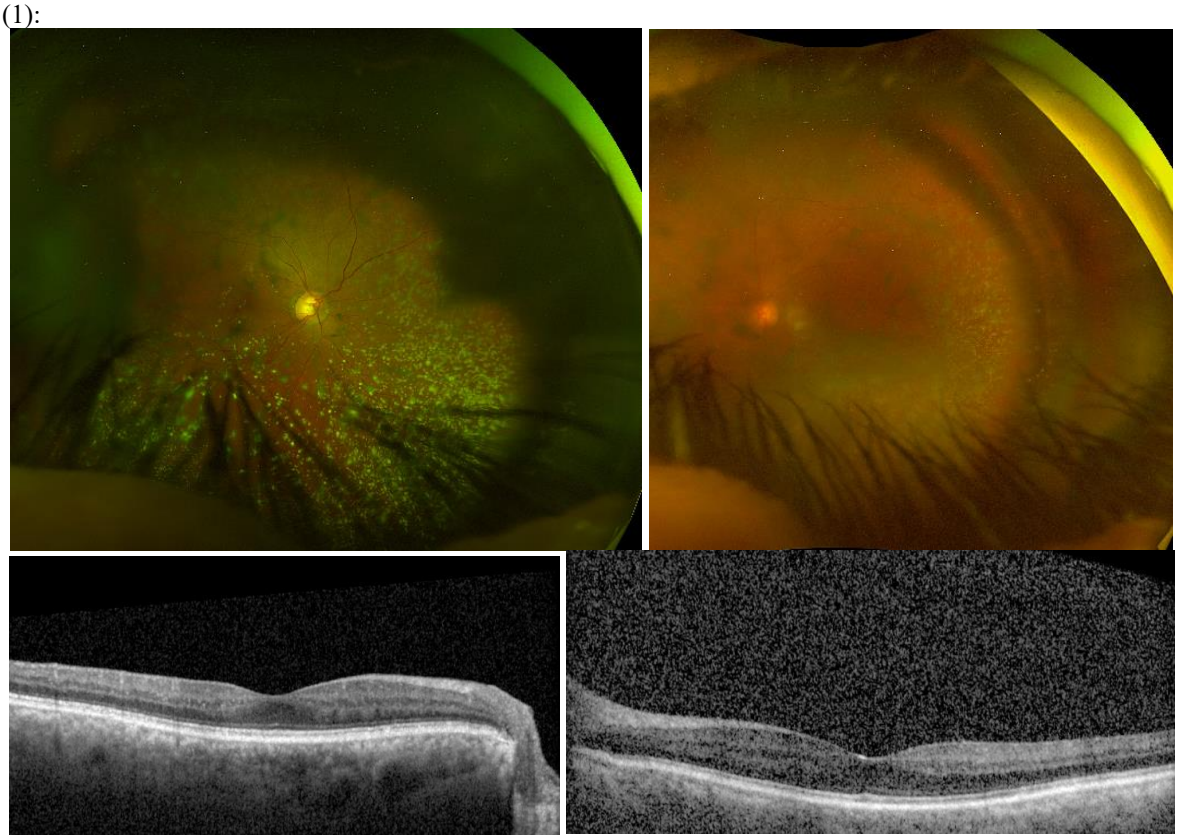


Figure 1: Visual fields. OS (oculus sinistra, left eye) and OD (oculus dexter, right eye) at first evaluation (1) and second evaluation (2)

Ultrawide-field retinal imaging (Optos Daytona) and macular OCT (Heidelberg Spectralis) (Figure 2) indicated media haziness in the left eye but revealed normal macular and retinal architecture, with a normal retinal nerve fiber layer (RNFL) in both eyes.

(1):



(2):

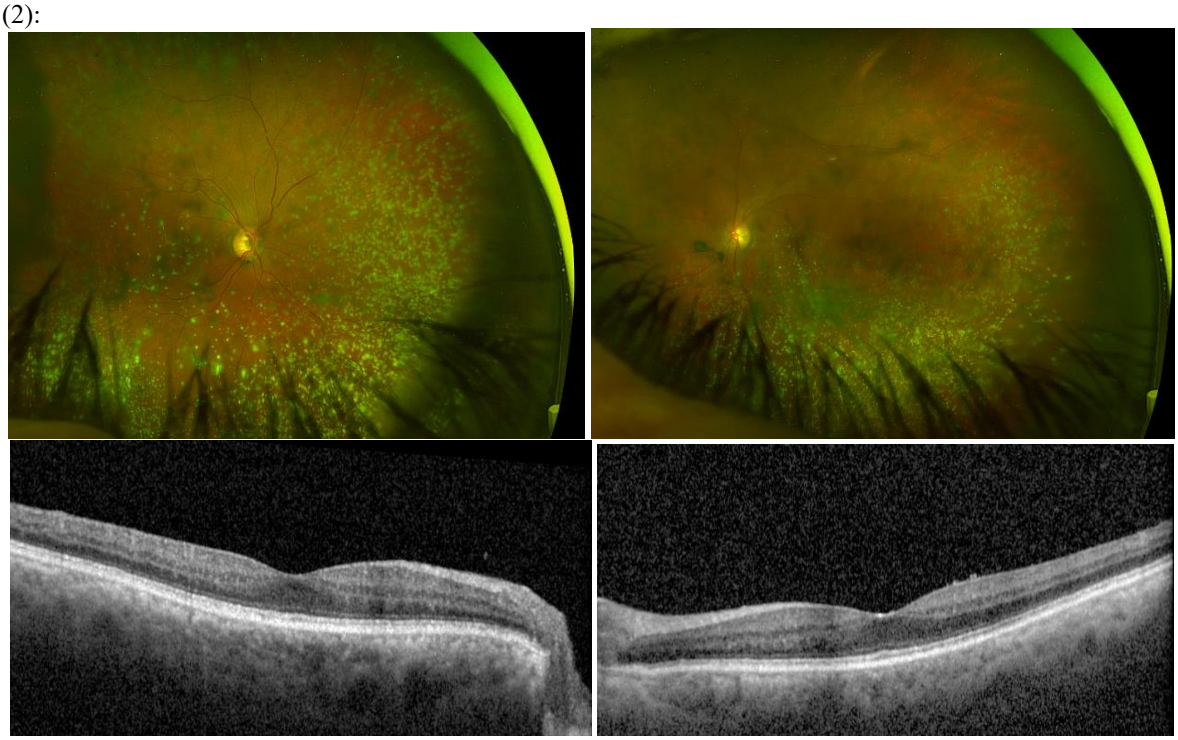
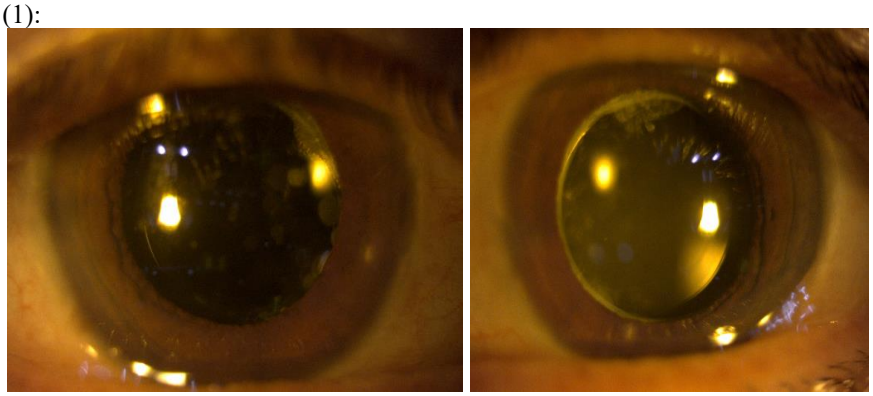


Figure 2: OPTOS ultrawide-field and macular OCT images at first evaluation (1) and second evaluation (2)

Slit-lamp examination showed no evidence of posterior capsular opacification (PCO) but identified a thickened yellowish cloudiness posterior to the IOL in the left eye (Figure 3). Both eyes exhibited synchysis scintillans. B-scan ultrasonography of the left eye excluded vitritis. Anterior segment OCT demonstrated hyperreflective material behind the left IOL, consistent with fluid accumulation (Figure 4).

(1):



(2):

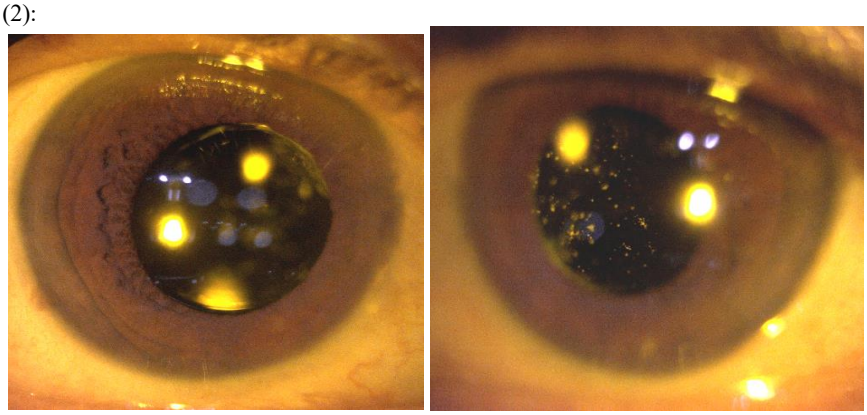
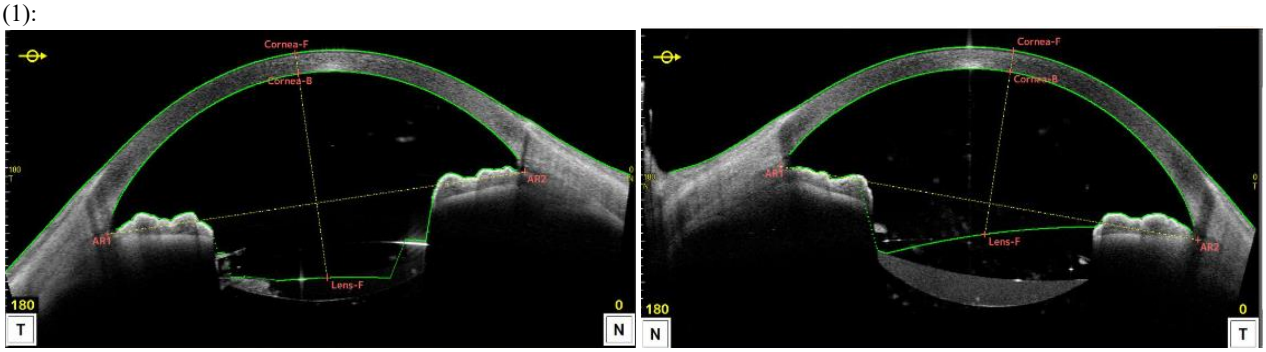


Figure 3: Slit-lamp anterior segment photographs of the right and left eye, demonstrating capsular bag distension syndrome in the left eye at first evaluation (1) and second evaluation (2)

(1):



(2):

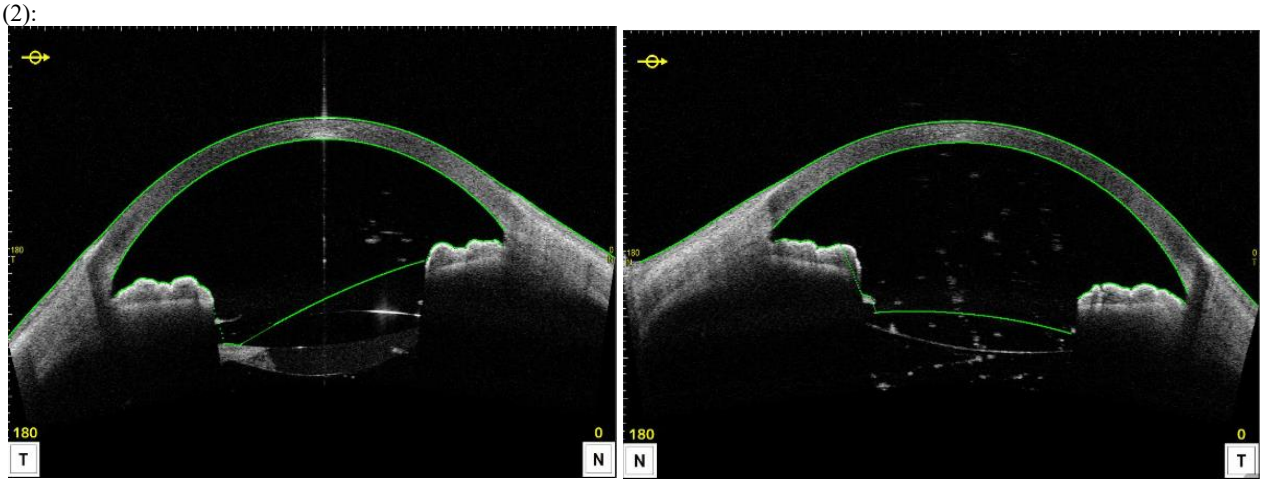


Figure 4: Anterior segment OCT images of the right and left eye, illustrating hyperreflective material posterior to the left IOL corresponding to fluid accumulation associated with Capsular Bag Distension Syndrome at first evaluation (1) and second evaluation (2)

A diagnosis of Capsular Bag Distension Syndrome (CBDS) was established. Nd:YAG laser posterior capsulotomy was performed on the left eye, resulting in rapid evacuation of the trapped fluid. The patient experienced immediate visual acuity improvement. Post-procedure dexamethasone eye drops were prescribed six times daily for one week in the left eye to relieve inflammation secondary to liberated trapped material.

Follow-up approximately one week later confirmed resolution of visual blurring. Visual acuity in the left eye improved from 20/60 to 20/20. IOP was normal. Post-capsulotomy refraction measurements demonstrated normalization of refractive error:

Eye	Spherical	Cylinder	Axis
Right	-0.25	-2.25	103
Left	-0.25	-1.50	093

This case highlights the importance of considering CBDS as a rare but reversible etiology of sudden visual deterioration following cataract surgery. Despite an extensive systemic workup to exclude sight and life-threatening conditions, timely diagnosis and intervention with Nd:YAG laser capsulotomy resulted in rapid symptom resolution. The protracted asymptomatic interval of approximately ten years prior to sudden symptom onset and the preceding comprehensive rheumatologic and neurologic evaluations further highlight the diagnostic challenge.

DISCUSSION

Capsular Bag Distension Syndrome (CBDS) constitutes a complex postoperative complication following cataract extraction, characterized by the accumulation of fluid and retained substances within the capsular bag, disrupting the anatomical relationship between the intraocular lens and posterior capsule. If a patient exhibits subtle inflammatory markers, concurrent age-related comorbidities, or vascular changes, a mechanical/optical issue like CBDS, or conversely, an acute neuro ophthalmic crisis like giant cell arthritis associated ischemic optic neuropathy, may obscure the primary diagnosis or lead to diagnostic delay if detailed funduscopy and temporal artery evaluations are not prioritized. Although the precise pathophysiology of CBDS remains incompletely elucidated, a prevailing theory posits that aqueous humor enters the sealed capsular bag driven by an osmotic gradient created by retained viscoelastic substances [4]. The sealing is believed to result from the IOL pressing against the capsulorhexis edge and obstructing fluid egress.

Miyake *et al.,* categorized CBDS into three types based on the timing of onset: a) Intraoperative CBDS, which occurs in eyes with posterior capsule rupture and core dislocation that obstructs the anterior capsular opening following hydrodissection, and is more common in mature cataracts and eyes with a larger visual axis; b) Early-onset CBDS, typically appearing on the first postoperative day but possibly developing within the first two weeks after surgery; c) Late-onset CBDS, characterized as a chronic condition that generally emerges around 3.8 years post-surgery, though recent findings report occurrences up to 33 years after cataract surgery [3], [5].

Kim *et al.,* introduced a newer classification system for CBDS based on pathogenesis from an analysis of eight cases, dividing it into three groups: a) acellular, which appears early on the first postoperative day due to retained viscoelastic material with minimal cellular response or fibrosis between the IOL and anterior capsule; b) inflammatory, involving early CBDS accompanied by inflammation and fibrin formation; and c) fibrotic, representing late CBDS caused by mechanisms such as metaplasia and proliferation of lens epithelial cells [6].

In our case, CBDS was found almost a decade after cataract surgery, prompting a diagnosis of late-onset CBDS. We were unable to document any myopic shift from our examination, but given that cases of late-onset CBDS exhibit capsular fibrosis, this may be the most plausible classification of our case. As in our case, patients often have no symptoms of CBDS for years because the condition develops slowly, and the late-onset variant is caused by a progressive, long-term biological process rather than an immediate surgical complication. The late-onset variant has been widely documented. Nishi *et al.,* describe that fluid accumulation in late CBDS gradually results in visual blurring approximately 5 years post-cataract surgery [7]. However, the sudden blurriness is a rare yet intriguing phenomenon (Table 1). The exact mechanism underlying the sudden blurring remains unclear; however, we hypothesize that it may occur when the trapped fluid becomes sufficiently dense or voluminous to significantly alter the lens position or obstruct light. The condition can remain asymptomatic for years, only to suddenly cause blurry vision due to fluid turbidity. Initially, the accumulated fluid is clear and often asymptomatic, causing sudden blurriness only when it becomes opaque, as observed in our case. A comparable explanation was provided in a recent study by Jeria *et al.,*, which demonstrated that the volume of trapped fluid increases to such an extent that the capsule undergoes significant distension and cloudiness, thereby altering the refractive power of the eye [8]. Another potential issue is the myopic shift, characterized by the accumulation of fluid that results in the anterior displacement of the intraocular lens (IOL). The abrupt myopic shift can lead to patients experiencing a sudden onset of blurred vision. However, we were unable to document this phenomenon in our case and it is predominantly associated with early-onset CBDS. The possible triggers for sudden symptoms may also be further fibrosis of the capsular bag causing it to completely tighten, abruptly sealing off any remaining

leakage pathways [9]. Lastly, some specific cases have also described a very low-grade infection (such as *Propionibacterium acnes*) which may lie dormant for years, then flare up, accelerating the production of the white material behind the IOL [10].

While early-onset CBDS usually causes an anterior displacement of the IOL i.e. myopic shift, late-onset CBDS usually causes a stable, fixed refractive change due to the trapped fluid [11]. Because late-onset cases often occur years after surgery the fibrotic nature of the bag and capsulorhexis keeps the IOL stable, even when the posterior capsule is opened. However, the fibrotic variant of CBDS may pose particular challenges, as proliferative lens epithelial cells and extracellular matrix deposition may create a sealed environment resistant to laser decompression, often resulting in persistent refractive alterations and incomplete resolution of capsular distension. The fibrotic variant may necessitate thorough intraoperative cleaning to minimize retained material. While Nd:YAG laser capsulotomy remains the first-line treatment for fluid evacuation, cases exhibiting severe fibrotic sealing or refractory fluid accumulation may sometime require surgical intervention to physically remove residual material and restore capsular bag integrity [12]. The rare but serious risk of postoperative Propionibacterium acnes-associated endophthalmitis following laser treatment highlights the importance of vigilant postoperative monitoring and prompt management of atypical inflammatory or infectious presentations [13]. Fortunately, our case did not present with any symptoms of intraocular inflammation or infection at final assessment.

Risk factors for the development of CBDS include retained ophthalmic viscoelastic devices entrapped between the lens implant and posterior capsule [14], specific IOL characteristics or traits, which include relatively soft haptics predisposing to anterior displacement and adherence to a small continuous curvilinear capsulorhexis [15], postoperative inflammation and capsular fibrosis [16], [17], and specific capsulorhexis techniques that create a valve-like mechanism impeding fluid escape [18]. Additionally, a large capsular bag, commonly observed in males, younger patients, and those with subcapsular or mature cataracts, has been associated with increased risk of CBDS development due to greater likelihood of retained fluid or viscoelastic material [19].

A major strength of this case is the unusual presentation of late-onset CBDS, occurring almost a decade after cataract surgery and presenting with sudden subjective and clinically confirmed reduction in visual acuity. Although sudden-onset visual deterioration has previously been described in late-onset CBDS, such presentations appear to be very uncommon (Table 1). Galvin *et al.,* reported a late-onset case presenting with a five-day history of a black spot and blurred vision seven years after cataract surgery, while a 2019 case series described sudden-onset blurred vision in a 68-year-old patient two years after surgery, with resolution of the myopic shift following laser posterior capsulotomy [20], [21]. The novelty of the present case therefore lies not solely in the sudden visual deterioration, but in its combination with very late onset, occurring almost a decade after cataract surgery. Several limitations should nevertheless be acknowledged. A reliable initial autorefraction measurement could not be obtained for the affected left eye, limiting objective assessment of the refractive change at presentation. Furthermore, no documented pre-existing BCVA was available, as the cataract surgery had been performed in an outpatient setting; therefore, although the patient reported a sudden decrease in visual acuity that was confirmed at presentation, the magnitude and exact onset of the change cannot be objectively established against a prior measurement. Finally, follow-up was limited to one week, and therefore the possibility of later postoperative inflammation or other delayed sequelae could not be assessed. Although late-onset CBDS is generally not associated with clinically evident intraocular inflammation, rare cases have been associated with indolent Propionibacterium acnes infection; therefore, the limited one-week follow-up precludes assessment of very delayed inflammatory or infectious sequelae [10].

CONCLUSION

We found that late-onset CBDS may present with sudden decreased visual acuity, possibly due to trapped fluid behind the IOL, which becomes voluminous enough to shift the lens position just enough for it to be symptomatic. As far as we know, very few cases of the extended asymptomatic period lasting several years before the abrupt appearance of symptoms have been documented, and further research is needed to elucidate the underlying mechanisms and identify factors influencing this occurrence. Clinicians must maintain vigilance regarding CBDS in patients with a history of cataract surgery, as it constitutes a rare yet reversible cause of visual deterioration, which may manifest either suddenly or gradually.

Table 1: Reported cases in the past twenty years of decreased visual acuity in capsular bag distension syndrome

Study (year)	Reported cases	Age (years)	Sex	Eye	Time since cataract surgery	CBDS onset	Symptom onset (Days/Months/Years)	Diagnostic modality	VA before/at presentation in CBDS eye	Management	VA after treatment	Follow-up	Medication peri- or postoperatively	Sign of inflammation post-operatively?
Gokce *et al.,* (2026) [22]	2	80	M	OD	NA	Late	Months	Pentacam AS-OCT	HM	Nd:YAG	20/20	1. day, 1. week, and 3 months	Timolol, prednisolone, cyclopentanolate postoperatively	Yes
		60	F	OD	10 years	Late	Months	Pentacam AS-OCT	NA	Nd:YAG	20/20	1. day, 1. week, and 3 months	Timolol, prednisolone, cyclopentanolate postoperatively	Yes
Shirian *et al.,* (2026) [23]	1	74	M	OD	15 years	Late	Months	Slit lamp	20/30	Nd:YAG	NA	NA	Prednisolone postoperatively	No
Demolin *et al.,* (2026) [24]	1	65	M	OD	5 days	Early	Days	Pentacam AS-OCT	20/200	Surgical aspiration	20/25	1. day and 5. day	Steroidal, nonsteroidal anti-inflammatory, antibiotic therapy postoperatively	NA
Mansoori et al (2026) [25]	1	52	M	OD	10 years	Late	NA	Slit lamp AS-OCT	20/20	Nd:YAG	NA	1. week	Topical prednisolone acetate postoperatively	No
Lizzio *et al.,* (2024) [3]	1	87	M	OS	33 years	Late	Years	Slit lamp UBM AS-OCT	CF	PPV and PC	20/25	After 15 days and 6 months	Intravitreal vancomycin perioperatively	No
Du *et al.,* (2024) [26]	1	64	F	OD	4 years	Late	Years	IOL-master UBM B-scan	6/20	Anterior capsule peeling and AV	20/25	Regular visits until 6 months	NA	No
Al-Mulla *et al.,* (2021) [10]	1	54	M	OS	13 years	Late	Years	Slit lamp UBM	20/400	PPV and PC	20/25	Regular visits until 6 months	NA	No
Kommineni *et al.,* (2020)[27]	1	55	M	OD	3 years	Late	Weeks	Slit lamp UBM	6/12	Nd:YAG	6/6	2. week	Betnesol-N postoperatively	NA
Sandhaus *et al.,* (2019)[20]	2	68	M	OD	2 years	Late	Sudden	Slit lamp	20/20	Nd:YAG	NA	NA	NA	NA
		67	M	OD	7 years	Late	Months	AS-OCT	NA	Nd:YAG	NA	NA	NA	NA
Otrošinová *et al.,* (2019)[28]	1	72	F	OD	4 years	Late	Weeks	Slit lamp Pentacam AS-OCT	0.32	Surgical aspiration	0.8	Regular visits until 6 months	Corticosteroids and antibiotics postoperatively	NA
Goerlitz-Jessen *et al.,* (2019)[29]	1	72	M	OD	6 years	Late	Months	Slit lamp AS-OCT	20/20 (-1)	Nd:YAG	NA	NA	NA	NA
Galvin *et al.,* (2018)[21]	2	73	F	OS	13 years	Late	Months	Slit lamp AS-OCT IOL-Master	6/9	PPV and PC	6/6 (with pinhole)	1. month	Intracameral cephazolin 1mg/0.1ml and subconjunctival dexamethasone perioperatively	No
		68	F	OS	7 years	Late	Days	Slit lamp AS-OCT IOL-Master	6/18 (-1)	PPV and PC	6/12 (pinhole 6/7,5)	1. month	Intracameral cephazolin 1mg/0.1ml and subconjunctival dexamethasone perioperatively	No
Koh *et al.,* (2016)[30]	1	72	M	Left	5 years	Late	Months	Slit lamp	20/100	Nd:YAG	20/30	1. week	NA	NA
Zafeiropoulos *et al.,* (2014)[31]	2	72	M	OD	8 years	Late,	NA	Slit lamp	5/10	Nd:YAG	10/10	Few days, 3. month	NA	NA
		71	F	OD	6 years	Late	NA	Slit lamp	6/10	Nd:YAG	10/10	1. month, 6. month	NA	NA
Rana *et al.,* (2013)[32]	1	75	F	OD	8 years	Late	Months	Slit lamp	20/20	Surgical aspiration	20/20	5. day	Intravitreal vancomycin perioperatively	No
Morgan-Warren *et al.,* (2011)[33]	1	74	M	OS	7 years	Late	Months	Slit lamp	6/18	Nd:YAG	6/9	Regular visits until 6 weeks	No	No
Das *et al.,* (2010)[34]	1	55	M	OD	3 years	Late	Weeks	Slit lamp UBM	6/12	Nd:YAG	6/6	Two weeks	Betnesol-N postoperatively	NA
Wendrix *et al.,* (2006)[35]	2	81	F	OD	4 years	Late	NA	Slit lamp	4/10	Nd:YAG	8/10	NA	NA	NA
		84	M	OS	5,5 years	Late	NA	Slit lamp	7/10	Nd:YAG	7/10	NA	NA	NA
Muñoz-Negrete *et al.,* (2005)[36]	4	75	F	OS	2 years	Late	NA	Slit lamp	20/40	PPV and PC	20/200	NA	NA	NA
		68	M	OD	5 months	Late	NA	Slit lamp	CF	Nd:YAG	No info	NA	NA	NA
		69	M	OD	1 month	Late	NA	Slit lamp	No info	Nd:YAG	20/60	NA	NA	NA
		65	M	OD	3 years	Late	NA	Slit lamp	20/60	Nd:YAG	20/40	NA	NA	NA

Abbreviations: CBDS, Capsular bag distension syndrome; VA, visual acuity; HM, hand motion; Nd:YAG, neodymium-doped yttrium aluminium garnet; NA, not available; OD, oculus dextra; OS, oculus sinistra; AS-OCT, anterior segment optical coherence tomography; CF, counting fingers; PPV, pars plana vitrectomy; PC, posterior capsulotomy; AV, anterior vitrectomy.

DECLARATIONS

Ethics approval and consent to participate: Not applicable

Consent for publication
Written informed consent was obtained from the patient for the publication of this case report and any accompanying clinical images. A signed consent form is available upon request.

Competing interests: The authors declare no competing interests

Acknowledgements: None

Author contributions
OS: Data collection, and manuscript writing. OS, MS, CL: Conceptualization, methodology design, data interpretation, and critical revision of the manuscript for intellectual content. CL: Supervision and final approval of the manuscript for submission. All authors read and approved the final manuscript.

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Data availability: Data is available upon reasonable request from the corresponding author.

REFERENCES

1. J. A. Davison, 'Capsule contraction syndrome', J. Cataract Refract. Surg., vol. 19, no. 5, pp. 582–589, Sep. 1993, doi: 10.1016/S0886-3350(13)80004-1.
2. H. K. Kim and J. P. Shin, 'Capsular block syndrome after cataract surgery: Clinical analysis and classification', J. Cataract Refract. Surg., vol. 34, no. 3, pp. 357–363, Mar. 2008, doi: 10.1016/j.jcrs.2007.11.026.
3. R. A. U. Lizzio *et al.*, 'Late-onset capsular bag distension syndrome 33 years after cataract surgery', Am. J. Ophthalmol. Case Rep., vol. 36, p. 102112, Dec. 2024, doi: 10.1016/j.ajoc.2024.102112.
4. N. A. Shah and D. B. Goulstine, 'Capsular block syndrome presenting with a hyperopic shift', J. Cataract Refract. Surg., vol. 32, no. 11, pp. 1974–1976, Nov. 2006, doi: 10.1016/j.jcrs.2006.06.026.
5. K. Miyake, I. Ota, S. Ichihashi, S. Miyake, Y. Tanaka, and H. Terasaki, 'New classification of capsular block syndrome', J. Cataract Refract. Surg., vol. 24, no. 9, pp. 1230–1234, Sep. 1998, doi: 10.1016/S0886-3350(98)80017-5.
6. H. K. Kim and J. P. Shin, 'Capsular block syndrome after cataract surgery: Clinical analysis and classification', J. Cataract Refract. Surg., vol. 34, no. 3, pp. 357–363, Mar. 2008, doi: 10.1016/j.jcrs.2007.11.026.
7. O. Nishi, K. Nishi, and E. Takahashi, 'Capsular bag distention syndrome noted 5 years after intraocular lens implantation', Am. J. Ophthalmol., vol. 125, no. 4, pp. 545–547, Apr. 1998, doi: 10.1016/S0002-9394(99)80195-0.
8. S. Jeria, R. Nagar, P. Nangia, and V. Nangia, 'Capsular bag distension syndrome: Swept-source optical coherence tomography features', Oman J. Ophthalmol., vol. 18, no. 1, pp. 93–94, Jan. 2025, doi: 10.4103/ojo.ojo_192_24.
9. K. A. Cautela, A. F. Passos, and A. G. Mendes, 'Capsular block syndrome - report of two cases', Rev. Bras. Oftalmol., vol. 73, no. 1, 2014, doi: 10.5935/0034-7280.20140012.
10. A. H. Al-Mulla and M. W. Al-Rushoud, 'Unusual Late Presentation of Capsular Bag Distension Syndrome Associated With Propionibacterium acnes Endophthalmitis', Cureus, Nov. 2021, doi: 10.7759/cureus.19684.
11. M. K. Yang, W. R. Wee, J.-W. Kwon, and Y. K. Han, 'Anterior Chamber Depth and Refractive Change in Late Postoperative Capsular Bag Distension Syndrome: A Retrospective Analysis', PLoS One, vol. 10, no. 4, p. e0125895, Apr. 2015, doi: 10.1371/journal.pone.0125895.
12. Q. Luo *et al.*, 'Lens capsule-related complications in cataract phacoemulsification: Advances in pathophysiology and clinical management', Advances in Ophthalmology Practice and Research, May 2026, doi: 10.1016/j.aopr.2026.05.002.
13. M. Chaudhry, S. Baisakhiya, and M. Bhatia, 'A rare complication of Nd-YAG capsulotomy: Propionibacterium acnes endopthalmitis', Nepalese Journal of Ophthalmology, vol. 3, no. 1, pp. 80–82, Jan. 1970, doi: 10.3126/nepjoph.v3i1.4283.
14. B. R. McQueen and C. E. Margo, 'Capsular bag distention syndrome after combined cataract-lens implant surgery and ahmed valve implantation', Am. J. Ophthalmol., vol. 132, no. 1, pp. 109–110, Jul. 2001, doi: 10.1016/S0002-9394(00)00935-1.
15. K. Miyake, I. Ota, S. Ichihashi, S. Miyake, Y. Tanaka, and H. Terasaki, 'New classification of capsular block syndrome', J. Cataract Refract. Surg., vol. 24, no. 9, pp. 1230–1234, Sep. 1998, doi: 10.1016/S0886-3350(98)80017-5.
16. S. Masket, 'Postoperative complications of capsulorhexis', J. Cataract Refract. Surg., vol. 19, no. 6, pp. 721–724, Nov. 1993, doi: 10.1016/S0886-3350(13)80340-9.
17. K. Kitagawa, S. Hayasaka, and Y. Nagaki, 'Increased aqueous flare intensity in eyes with liquefied after-cataract', J. Cataract Refract. Surg., vol. 30, no. 6, pp. 1342–1344, Jun. 2004, doi: 10.1016/j.jcrs.2003.09.021.
18. G. Baikoff, P. Rozot, E. Lutun, and J. Wei, 'Assessment of capsular block syndrome with anterior segment optical coherence tomography', J. Cataract Refract. Surg., vol. 30, no. 11, pp. 2448–2450, Nov. 2004, doi: 10.1016/j.jcrs.2004.07.005.
19. P. Kanclerz and X. Wang, 'Postoperative Capsular Bag Distension Syndrome – Risk Factors and Treatment', Semin. Ophthalmol., vol. 34, no. 6, pp.

409–419, Aug. 2019, doi: 10.1080/08820538.2019.1640750.
20. S. Sandhaus, J. G. Flettner, and A. B. Mick, 'Case Series: Late Postoperative Capsular Block Syndrome Causing Reduced Vision Years After Uncomplicated Cataract Surgery', Optometry and Vision Science, vol. 96, no. 9, pp. 710–715, Sep. 2019, doi: 10.1097/OPX.0000000000001425.
21. J. C. Galvin, P. Berdoukas, and A. T. Fung, 'Two cases of very late-onset capsular bag distension syndrome', Am. J. Ophthalmol. Case Rep., vol. 10, pp. 268–270, Jun. 2018, doi: 10.1016/j.ajoc.2018.03.019.
22. G. Doğan Gökçe, G. Özkan, and S. Akkaya Turhan, 'Assessing Multi-Modal Imaging for Late Capsular Bag Distension Syndrome: A Study of Two Clinical Cases', Beyoglu Eye Journal, pp. 176–180, 2026, doi: 10.14744/bej.2026.26023.
23. J. D. Shirian, N. S. Azar, M. M. Brown, and A. Lin, 'Late Postoperative Capsular Bag Distension Syndrome Presenting 15 Years After Surgery Successfully Treated With Neodymium-Doped Yttrium Aluminum Garnet Posterior Capsulotomy', Cureus, Jun. 2026, doi: 10.7759/cureus.111770.
24. L. Demolin, E. Motulsky, A. El Belhadji, and O. Kallay, 'Postoperative Capsular Bag Distension Syndrome: Case Report of an Early Case Following Athalamia due to Vigorous Eye Rubbing', Case Rep. Ophthalmol. Med., vol. 2026, no. 1, Jan. 2026, doi: 10.1155/crop/8798298.
25. T. Mansoori and M. L. Karthika, 'Delayed-Onset Fibrotic Capsular Bag Distension Syndrome', Cureus, Feb. 2026, doi: 10.7759/cureus.104065.
26. Y.-H. Du, X.-F. Liang, K. Hirooka, H.-K. Xia, and Z.-Y. Jia, 'A potential role for inflammatory cytokines in a rare late-onset capsular block syndrome: a case report', BMC Ophthalmol., vol. 24, no. 1, p. 53, Feb. 2024, doi: 10.1186/s12886-024-03320-0.
27. U. Kommineni, P. Gogri, and A. Biala, 'Delayed capsular bag distension syndrome', Indian J. Ophthalmol., vol. 68, no. 10, p. 2257, 2020, doi: 10.4103/ijo.IJO_863_20.
28. M. Otrošinová and J. Novák, 'Case report Late Postoperative Capsular Bag Distension Syndrome', Cesk Slov Oftalmol, no. 75, pp. 46–51, Jun. 2019.
29. M. Goerlitz-Jessen and M. Dagli, 'Delayed Rapid-Onset Capsular Bag Distension Syndrome', Ophthalmol. Glaucoma, vol. 2, no. 6, p. 412, Nov. 2019, doi: 10.1016/j.ogla.2019.08.001.
30. J. S. Koh, Y. Bin Song, W. R. Wee, and Y. K. Han, 'Recurrent late-onset fibrotic capsular block syndrome after neodymium-yttrium-aluminum-garnet laser anterior capsulotomy: a case report', BMC Ophthalmol., vol. 16, no. 1, p. 86, Dec. 2016, doi: 10.1186/s12886-016-0261-x.
31. P. Zafeiropoulos, A. Katsanos, K. Gorgoli, I. Asproudis, and M. Aspiotis, 'LATE-ONSET CAPSULAR BAG DISTENSION SYNDROME: A REPORT OF TWO CASES', Acta Medica (Hradec Kralove, Czech Republic), vol. 57, no. 4, pp. 165–167, 2014, doi: 10.14712/18059694.2015.83.
32. M. Rana, L. Jiang, B. Ilango, and Y. Yang, 'Late-Onset Capsular Block Syndrome: Unusually Delayed Presentation', Case Rep. Ophthalmol., vol. 4, no. 3, pp. 299–302, Dec. 2013, doi: 10.1159/000357398.
33. P. Morgan-Warren and A. Manna, 'Late-onset capsular bag distension syndrome following cataract surgery', JRSM Short Rep., vol. 2, no. 6, pp. 1–3, Jun. 2011, doi: 10.1258/shorts.2011.011053.
34. K. Das, 'Delayed capsular bag distension syndrome', Oman J. Ophthalmol., vol. 3, no. 3, p. 155, 2010, doi: 10.4103/0974-620X.71905.
35. G. Wendrix and T. Zeyen, 'Late-onset capsular bag distention syndrome after cataract surgery: 2 case-reports', Bull Soc Belge Ophtalmol, no. 301, pp. 67–9, 2006.
36. Francisco. J. Muñoz-Negrete and G. Rebolleda, 'Capsular bag distension syndrome after combined cataract and glaucoma surgery', Acta Ophthalmol. Scand., vol. 83, no. 2, pp. 252–255, Apr. 2005, doi: 10.1111/j.1600-0420.2005.00432.x.