Archives of
Ophtalmological Research

Case Report

DOI: 10.51271/AOR-0047

An aponeurotic blepharoptosis following uneventful cataract surgery: a case report

Nuhkan Görkemli, Mehmet Canleblebici*
Department of Ophthalmology, Kayseri State Hospital, Kayseri, Turkiye

Cite this article: Görkemli N, Canleblebici M. An aponeurotic blepharoptosis following uneventful cataract surgery: a case report. *Arch Ophthalmol Res.* 2026;3(1):17-19. doi:10.51271/AOR-0047

Received: 02/03/2026 ◆ **Accepted:** 16/03/2026 ◆ **Published:** 19/03/2026

ABSTRACT

This case reports a 72-year-old female who developed delayed-onset, severe blepharoptosis three months following uncomplicated phacoemulsification under topical anesthesia. Despite an uneventful surgery and visual recovery (6/6), the patient presented with complete visual axis obstruction in the right eye. Preoperative examination had previously noted mild involutional changes, including bilateral mild ptosis and deep superior sulci. Clinical findings post-surgery confirmed levator aponeurosis dehiscence with preserved levator function. Following six months period of observation, the patient underwent successful levator aponeurosis reattachment, achieving satisfactory functional and cosmetic results. This case highlights that postoperative ptosis may still occur after modern cataract surgery, even when minimally invasive techniques and topical anesthesia is used, particularly in patients with pre-existing involutional eyelid changes. It emphasizes the necessity of thorough preoperative eyelid assessment and patient counseling regarding involutional risk factors to manage expectations and ensure timely intervention for optimal postoperative satisfaction.

Keywords: Blepharoptosis, cataract surgery, phacoemulsification, levator aponeurosis, involutional ptosis

INTRODUCTION

Cataract surgery is one of the most commonly performed ophthalmic procedures and is generally associated with good visual outcomes. However, postoperative complications involving the periocular adnexa may still occur and can adversely affect functional vision and patient satisfaction. One such complication is postoperative upper eyelid blepharoptosis, which, although often transient, may persist and lead to significant visual axis obstruction.[1,2]

Post-cataract blepharoptosis is typically attributed to a multifactorial etiology, including aponeurotic dehiscence of the levator palpebrae superioris, mechanical stress from eyelid speculums, postoperative inflammation, and patient-related involutional changes.[3] Even with modern cataract surgery techniques, postoperative blepharoptosis may still emerge as a clinically significant and functionally limiting complication.[1]

In this report, we present an elderly patient of persistent blepharoptosis with pre-existing involutional changes following uncomplicated cataract surgery, highlighting the diagnostic approach, clinical course, and management strategy, with a focus on practical considerations for prevention and treatment.

CASE

A 72-year-old female patient presented with decreased visual acuity in her right eye. On admission, best-corrected visual acuity (BCVA) was 6/18 in the right eye and 6/9 in the left eye using a metric Snellen chart. Intraocular pressure were 15 mmHg in both eyes. Slit-lamp examination of the anterior segment revealed bilateral corticonuclear cataracts, which were more advanced in the right eye. Fundus examination was unremarkable in both eyes.

Preoperative eyelid evaluation demonstrated a marginal reflex distance-1 (MRD-1) of 2 mm bilaterally, consistent with mild bilateral ptosis. Deep superior sulcus was noted in both eyes, suggestive of underlying involutional changes of the eyelid. There was no history of previous ocular surgery, trauma, contact lens use, or neuromuscular disease.

Cataract surgery with phacoemulsification was performed on the right eye under topical anesthesia using proparacaine hydrochloride (Alcaine®). The patient demonstrated good cooperation throughout the procedure. Uneventful phacoemulsification was completed, with a total surgical time of approximately 11 minutes. No intraoperative complications occurred.

Postoperatively, uncorrected visual acuity (UCVA) in the operated eye was 6/6 at the one-month follow-up visit, the patient's UCVA in the right eye remained 6/6, with normal anterior and posterior segment findings.

***Corresponding Author:** Mehmet Canleblebici, mehmetcl@hotmail.com

Three months after cataract surgery, the patient re-presented unhappily with complaints of impaired vision, primarily due to difficulty opening her right eye. She specifically reported that the inability to adequately elevate the upper eyelid had become her most disabling symptom.

On eyelid examination, a severe right-sided upper eyelid ptosis was observed, resulting in complete obstruction of the visual axis. The left upper eyelid position remained unchanged and did not interfere with the visual axis. MRD-1 in the right eye was markedly reduced compared with preoperative measurements. Levator function of the right upper eyelid was assessed and found to be moderately preserved (9 mm). A deeper superior sulcus, elevation on the right eye brow and worsening of the ptosis on downgaze were noted. (Figure 1). Additionally, extraocular muscle movements were full in all directions of gaze, pupillary reflexes were normal and symmetric. No diplopia, fatigability, or diurnal variation of ptosis was noted.

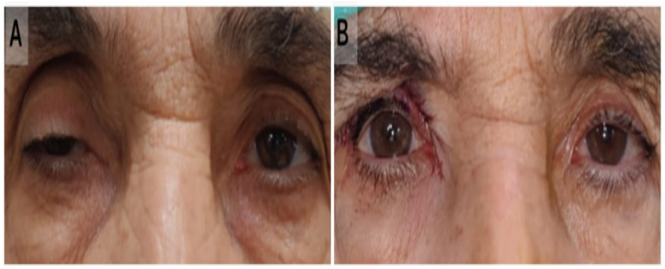

Figure 1. Clinical presentation of blepharoptosis and improvement after surgery

A) Preoperative clinical photograph demonstrating marked blepharoptosis of the right upper eyelid, with complete obstruction of the visual axis. Mild contralateral ptosis of the left upper eyelid is also evident but does not compromise the visual axis. B) Postoperative photograph following levator aponeurosis reattachment surgery, showing significant improvement in upper eyelid position on the right side, restoration of the visual axis, and satisfactory eyelid symmetry

Given the delayed onset of symptoms, preserved levator function, and clinical features suggestive of aponeurotic separation, a diagnosis of post-cataract iatrogenic aponeurotic blepharoptosis was made. After excluding neurogenic causes and allowing sufficient time for spontaneous recovery, surgical correction was recommended at sixth month.

The patient underwent levator aponeurosis reattachment surgery under local anesthesia. Through a standard upper eyelid crease incision, the levator aponeurosis was identified and found to be disinserted from the anterior surface of the tarsal plate. The aponeurosis was advanced and reattached to the tarsus using non-absorbable sutures, with intraoperative adjustment performed to achieve optimal eyelid height and contour. The procedure was completed without complications (Figure 2).

Postoperatively, eyelid position improved significantly, with restoration of the visual axis and satisfactory eyelid symmetry. No early or late postoperative complications were observed during follow-up. The patient reported marked functional and cosmetic satisfaction. Given the stable postoperative course, the patient was subsequently scheduled for routine follow-up and evaluation of cataract progression in the contralateral eye.

DISCUSSION

Blepharoptosis following cataract surgery is a well-recognized but often underestimated postoperative complication that may significantly impair functional vision and patient satisfaction. A recent meta-analysis reported an overall incidence of

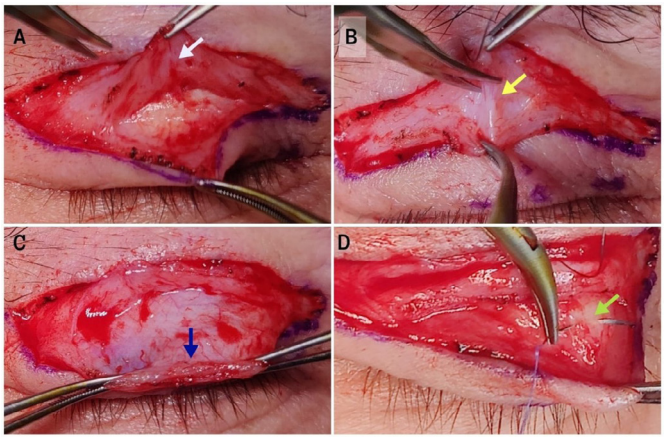

Figure 2. Demonstration of the levator aponeurosis reattachment surgery

A) The white arrow shows orbicularis oculi muscle was dissected. B) The yellow arrow shows orbital septum. C) The dissected levator muscle demonstrated with blue arrow. D) Suturing of the tarsus before reattachment of the levator muscle was presented with green arrow

postoperative ptosis of 11.4% (95% confidence interval: 10.1-12.8%) following ocular surgery.[4] The present case highlights the development of delayed-onset, visually significant blepharoptosis three months after uneventful cataract surgery performed under topical anesthesia.

The pathophysiology of post-cataract ptosis is multifactorial and includes aponeurotic dehiscence, anesthetic-related myotoxicity, mechanical stress from eyelid speculums, postoperative inflammation, and patient-related predispositions.[5,6] In the current case, several features support an aponeurotic mechanism as the primary etiology. Preoperatively, the patient demonstrated mild bilateral ptosis with reduced MRD-1 values and deep superior sulcus formation, suggesting pre-existing involutional changes of the levator aponeurosis. Cataract surgery likely acted as a precipitating factor, converting a subclinical condition into a functionally significant ptosis.[7] Clinicians should be aware of pre-existing involutional eyelid changes and counsel patients accordingly prior to cataract surgery.[7] Adequate preoperative counseling may help patients develop realistic expectations and improve psychological preparedness in the event that postoperative ptosis occurs.

Notably, the surgery was performed under topical anesthesia and completed within a relatively short duration, reducing the likelihood of myotoxic or neurogenic injury related to injectable anesthetic agents.[8] The delayed onset of symptoms further argues against transient postoperative edema or anesthetic effects, which typically resolve within weeks. In this case, it may be explained by gradual progression of a pre-existing involutional levator aponeurosis weakness. Mechanical stress during surgery may have initiated partial dehiscence, which subsequently progressed over time due to repetitive eyelid movements, chronic low-grade postoperative inflammation, or habitual eye rubbing. Such mechanisms may explain why clinically significant ptosis became evident several months after surgery rather than immediately in the early postoperative period. Although this was not a second-eye surgery in our patient, previous studies have suggested that second-eye cataract procedures may be associated with increased anxiety and stronger orbicularis muscle contraction during surgery. Excessive squeezing against the eyelid speculum may increase mechanical stress on a weakened levator aponeurosis and contribute to postoperative ptosis.[5]

Differential diagnosis is a critical step in evaluating postoperative ptosis. Neurogenic causes such as oculomotor nerve palsy, Horner syndrome, and myasthenia gravis must be excluded, particularly in elderly patients.[9] In this case, the absence of pupillary abnormalities, extraocular motility deficits, diurnal variability, or fatigability supported a mechanical rather than neurological etiology. The unilateral predominance of ptosis following surgery on the same side further strengthened the causal relationship with the cataract procedure.

Management of post-cataract ptosis generally begins with observation, as a significant proportion of cases resolve spontaneously within six months.[5] However, when ptosis persists beyond this period or causes visual axis obstruction, surgical intervention becomes necessary.[10] Given the preserved levator function and clinical findings consistent with aponeurotic separation, levator aponeurosis reattachment was selected as the treatment of choice in this patient.[2] This approach directly addresses the underlying structural defect and allows precise intraoperative adjustment of eyelid height and contour. The successful postoperative outcome in the present case confirms the effectiveness of this strategy when appropriate patient selection is performed.

This case underscores the importance of thorough preoperative eyelid assessment in patients undergoing cataract surgery. Subclinical ptosis, deep superior sulcus, and other signs of involutional change should be documented and discussed with patients preoperatively. Even with optimal surgical conditions, cataract extraction may unmask or exacerbate pre-existing eyelid instability. Awareness of this risk allows for realistic patient expectations and timely referral for oculoplastic evaluation when necessary.

CONCLUSION

In conclusion, this case demonstrates that visually significant blepharoptosis may develop months after uncomplicated cataract surgery, even under topical anesthesia. Cataract surgery can act as a triggering event in patients with pre-existing involutional eyelid changes, leading to aponeurotic dehiscence. Therefore, both surgeons and patients undergoing ocular surgery should be aware of this potential risk during the informed consent process. Moreover, operative techniques may be optimized to reduce the incidence of postoperative blepharoptosis. Careful diagnostic evaluation, appropriate timing of intervention, and tailored surgical management are essential to achieve favorable functional and cosmetic outcomes.

ETHICAL DECLARATIONS

Informed Consent

Written informed consent was obtained from the patient included in this report. Signed consent forms are retained by the authors and are available upon request.

Peer Review Process

This report underwent external peer review.

Conflict of Interest

The authors declare no conflicts of interest.

Financial Disclosure

This case report did not receive any financial support.

Author Contributions

Idea/Concept: NG, MC; Design: NG, MC; Control/Supervision: MC; Data Collection and/or Pro-cessing: NG, MC; Analysis and/or Inter-pretation: NG, MC; Literature Review: MC; Writing the Article: NG, MC; Critical Review: MC; Materials: MC.

REFERENCES

1. Kashkouli MB, Abdolalizadeh P, Es'haghi A, Nilforushan N, Aghaei H, Karimi N. Postoperative blepharoptosis after modern phacoemulsification procedure. *Am J Ophthalmol*. 2020;213:17-23. doi:10.1016/j.ajo.2019.12.023
2. Huo L, Cui D, Yang X, Gao Z, Zeng J. Etiology and treatment of post-surgical blepharoptosis. *Eye Sci*. 2013;28(3):134-139.
3. Putri FM. Relationship between contact lens wear and the risk of acquired blepharoptosis. *IOA*. 2023;49(S1):345-354. doi:10.35749/f7cvsk87
4. Wang Y, Lou L, Liu Z, Ye J. Incidence and risk of ptosis following ocular surgery: a systematic review and meta-analysis. *Graefes Arch Clin Exp Ophthalmol*. 2019;257(2):397-404. doi:10.1007/s00417-018-4130-6
5. Bacharach J, Lee WW, Harrison AR, Freddo TF. A review of acquired blepharoptosis: prevalence, diagnosis, and current treatment options. *Eye (Lond)*. 2021;35(9):2468-2481. doi:10.1038/s41433-021-01547-5
6. Karabulut S, Karabulut M. The impact of phacoemulsification surgery on upper eyelid elevator function. *ACMJ*. 2026;8(2):301-304. doi:10.38053/acmj.1841057
7. Godfrey KJ, Korn BS, Kikkawa DO. Blepharoptosis following ocular surgery: identifying risk factors. *Curr Opin Ophthalmol*. 2016;27(1):31-37. doi:10.1097/ICU.0000000000000218
8. Balbaba M, Ulaş F, Yıldırım H. Trabekülektomi sonrası pitoz gelişen üç olgu işığında literatürün gözden geçirilmesi ve cerrahi sonuçların değerlendirilmesi. *J Glaucoma-Cataract/Glokom-Katarakt*. 2019;14(1):26.
9. Koka K, Patel BC. Ptosis Correction. StatPearls. StatPearls Publishing Copyright © 2025, StatPearls Publishing LLC.; 2025.
10. Şen EM, Ceylanoğlu KS. Trabekülektomi sonrası pitozis insidansını etkileyen faktörler. *Turk J Ophthalmol*. 2023;53(2):85-90. doi:10.4274/tjo.galenos.2022.58812