

Traumatic Cataract Subluxation with Iridodialysis: Successful Anterior Segment Reconstruction - A Case Report

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Abstract: ***Purpose:** To report a rare case of traumatic cataract subluxation associated with iridodialysis and to describe its successful surgical management with complete reconstruction of the anterior segment. **Observations:** A patient presented with decreased vision following blunt ocular trauma. Slit-lamp examination revealed cataract subluxation along with iridodialysis. The patient underwent surgical management including cataract extraction, iris claw lens implantation, and iris repair. Postoperatively, the anterior segment anatomy was successfully restored with improvement in visual acuity.*

Keywords: Traumatic iridodialysis, traumatic cataract, subluxated cataract, Iridodialysis repair

1. Introduction

Ocular trauma is a significant cause of visual morbidity worldwide and can result in a variety of anterior segment injuries. Blunt trauma may lead to disruption of the lens zonules resulting in cataract subluxation or dislocation. Iridodialysis, defined as the separation of the iris root from its attachment to the ciliary body, is another potential consequence of blunt ocular trauma. The coexistence of traumatic cataract subluxation and iridodialysis is relatively rare and may pose challenges in surgical management.

We report a case of traumatic cataract subluxation associated with iridodialysis following blunt ocular trauma, which was successfully managed with surgical reconstruction of the anterior segment.

2. Case Report

A 49-year-old female presented with complaints of decreased vision in the right eye following blunt trauma to the eye 6 years prior to presentation.

On examination, the best-corrected visual acuity (BCVA) in the affected eye was counting fingers at 2 m, while the fellow eye had a BCVA of 20/60. Slit-lamp examination of the affected eye revealed subluxation of the cataractous crystalline lens with zonular dialysis, along with iridodialysis involving approximately 4 clock hours (Figure 1). The anterior chamber was shallow, and intraocular pressure was 18 mmHg.

Fundus examination revealed normal retina.

The patient underwent surgical management consisting of cataract extraction with posterior chamber lens implantation along with repair of iridodialysis.

Postoperatively, the patient was treated with topical antibiotics, corticosteroids, and cycloplegics. At the post-operative day 1, the anterior segment anatomy was well restored with a stable posterior chamber IOL and stable iris configuration (Figure 2). The BCVA improved to 20/200 improving with pinhole to 20/60 and the intraocular pressure remained within normal limits.

3. Discussion

Blunt ocular trauma can result in a wide spectrum of anterior segment injuries due to sudden compression and subsequent expansion of the globe. This mechanism can lead to disruption of the zonular fibers causing lens subluxation or dislocation, as well as separation of the iris root from the ciliary body resulting in iridodialysis. Traumatic cataract with associated zonular dialysis has been widely described; however, its coexistence with significant iridodialysis is relatively uncommon and may present unique surgical challenges.^{1 2}

Iridodialysis typically presents with symptoms such as glare, monocular diplopia, photophobia, or cosmetic concerns depending on the size and location of the defect. Small iridodialysis may be managed conservatively, whereas larger defects often require surgical repair to restore iris anatomy and improve visual function. Various techniques have been described for iridodialysis repair, including ab interno and ab externo suturing techniques, which aim to reattach the iris root to the scleral wall.³

Management of traumatic cataract with zonular instability requires careful surgical planning. Techniques such as capsular tension rings, capsular tension segments, iris-claw intraocular lenses, or scleral-fixated intraocular lenses may be employed depending on the extent of zonular damage and capsular support.^{4 5} Simultaneous management of lens

pathology and iris repair is often necessary to achieve optimal anatomical and visual outcomes.

In our case, the patient presented with traumatic cataract subluxation along with iridodialysis following blunt ocular trauma. Surgical intervention allowed successful removal of the cataractous lens, stabilization of the intraocular lens, and repair of the iris defect. Postoperatively, the patient demonstrated satisfactory restoration of anterior segment anatomy with improvement in visual acuity.

This case highlights the importance of comprehensive anterior segment evaluation in cases of ocular trauma and emphasizes that timely surgical management can effectively restore ocular structure and function. Awareness of appropriate surgical techniques and individualized treatment planning are essential for achieving favourable outcomes in such complex traumatic presentations.⁶

4. Conclusion

Traumatic cataract subluxation associated with iridodialysis is an uncommon but challenging clinical entity. Early diagnosis and appropriate surgical management can restore anterior segment anatomy and provide good visual rehabilitation.

Declaration of Patient Consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given

consent for clinical information and images to be reported in the journal. The patient understands that names and initials will not be published and due efforts will be made to conceal identity.

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Nil

Conflicts of Interest

There are no conflicts of interest.

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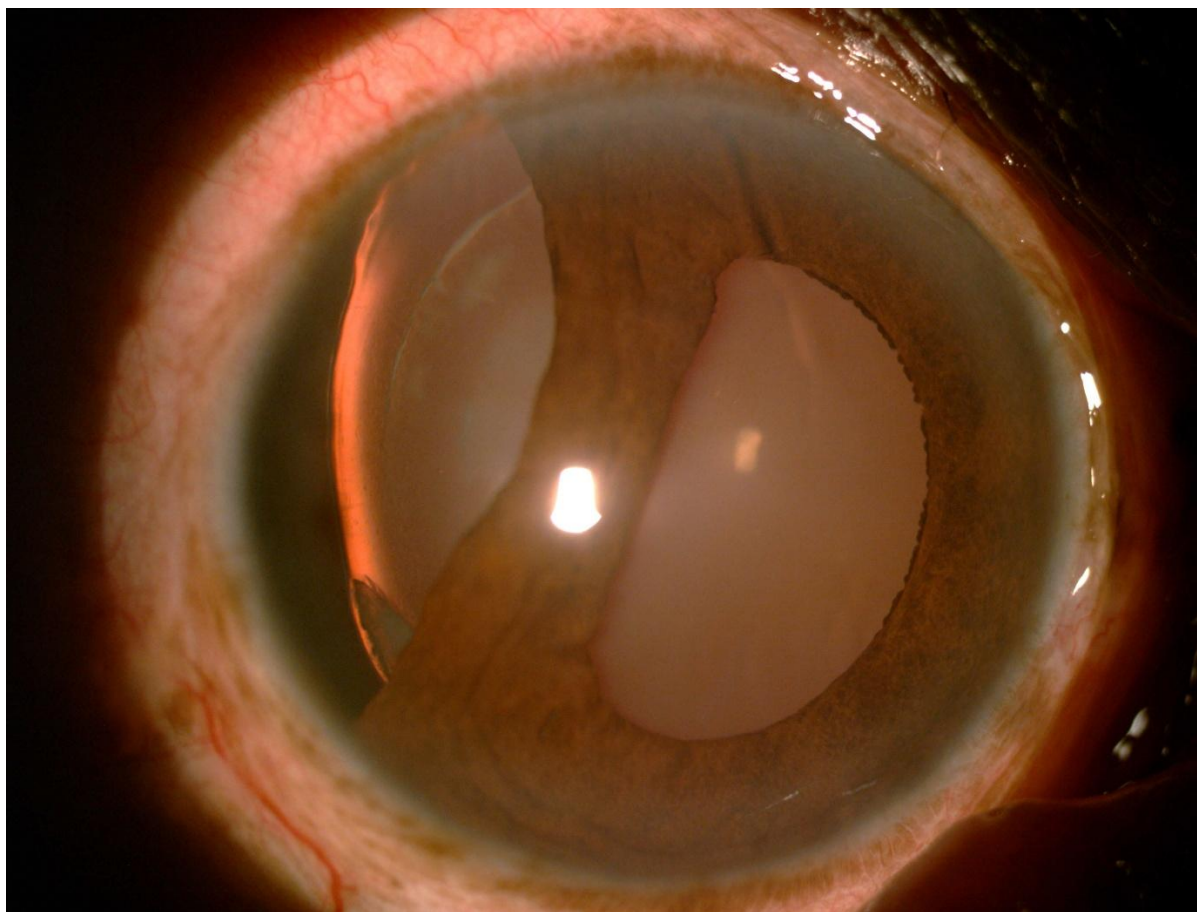


Figure 1

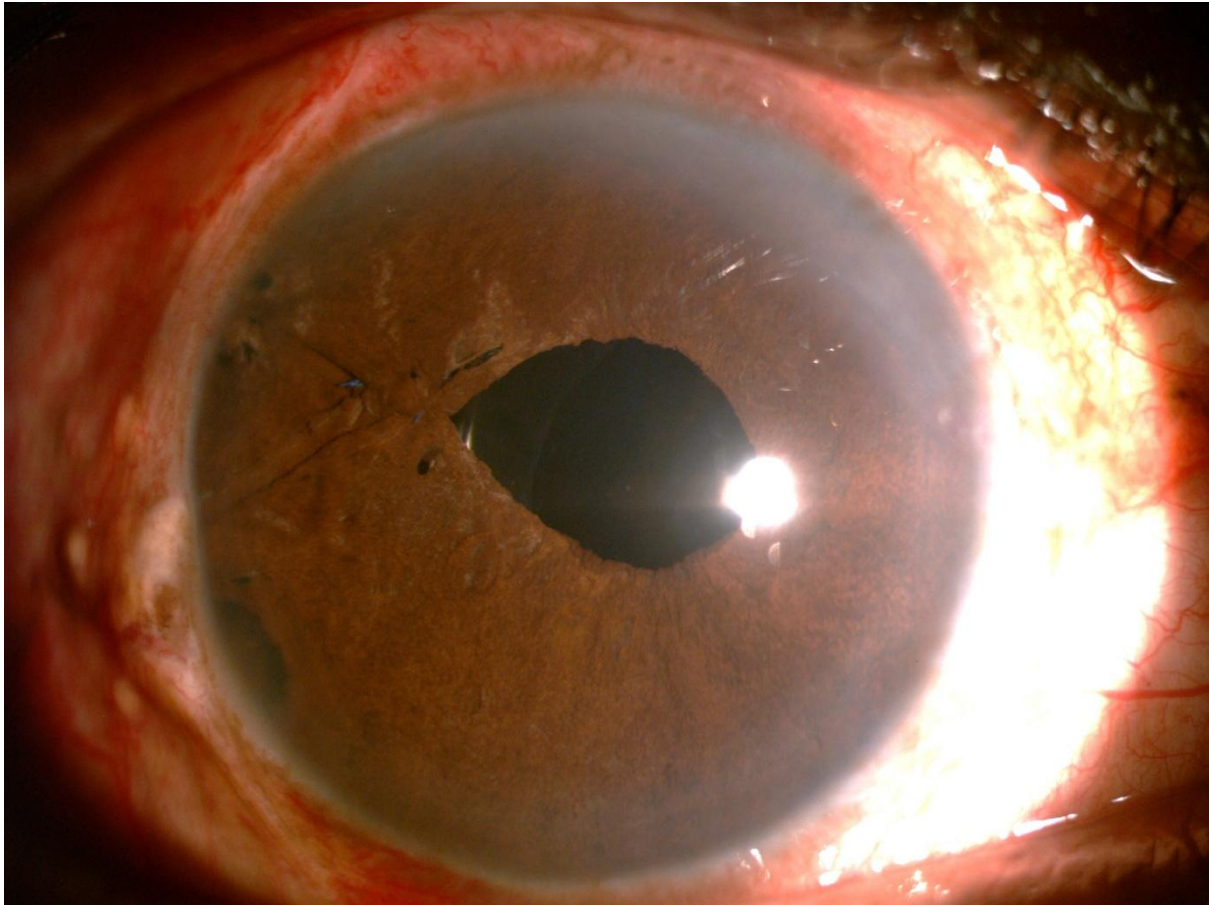


Figure 2

Figure Legends

Figure 1: Slit-lamp photograph of the anterior segment showing a subluxated traumatic cataract with iridodialysis

Figure 2: Slit-lamp photograph of the anterior segment showing postoperative posterior chamber lens with stable pupillary margin after surgical repair.