

# Presumed Transcorneal Extrusion of A Posterior Chamber Intraocular Lens

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## Abstract

**Purpose:** To describe a case with a rare complication of posterior chamber intraocular lens (PC-IOL) implantation in a patient who had undergone extracapsular cataract extraction (ECCE) two years before

**Case report:** A 80-year-old diabetic woman presented with an exposed PC-IOL in her left eye with a history of mechanical trauma. Slit-lamp examination revealed an extruded PC-IOL lied on the anterior surface of cornea. The IOL optic part was firmly attached to the anterior surface of cornea while the haptics pierced the corneal tissue to the ciliary sulcus, detectable by ultrasound biomicroscopy.

**Conclusion:** Posterior chamber intraocular lens dislocation can have grave consequences, including corneal touch, corneal decompensation and melting leading to severe visual loss. The possible mechanism of extrusion was presumed to be a cheese wiring process after corneal melting, leading to an exposed IOL.

**Keywords:** Corneal Melting, Extruded Intraocular Lens, IOL Exposure

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## Introduction

Intraocular lens extrusion is a rare condition with potentially sight-threatening complications. Most reported cases are related to ocular trauma and facial injuries.<sup>1,2</sup> Lens dislocation after trauma in the pseudophakic eye and extrusion of anterior chamber intraocular lens through the surgical wound has been well documented in the literature.<sup>1,3</sup> The erosion of anterior chamber lens through the sclera in patients with underlying connective tissue disorder is

reported as well.<sup>4,5</sup> Extrusion of a posterior chamber IOL through a diseased cornea at a site unrelated to the surgical incision is a rare complication.<sup>6</sup> Manoj described a case of transcorneal extrusion of a posterior chamber IOL following an episode of corneal ulcer.<sup>7</sup> Herein, we describe a case with a rare complication of posterior chamber intraocular lens (PC-IOL) implantation in a patient who had undergone extracapsular cataract extraction (ECCE) two years before.

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## Case report

An 80-year-old poorly controlled diabetic and hypertensive woman was referred to our clinic with complaint of decreased vision of her right eye since last month.

In general ophthalmologic examination, BCVA of right eye was one meter finger count (FC) with decreased red reflex. Slit-lamp biomicroscopy and fundus examination of the right eye disclosed a posterior chamber intraocular lens with dense vitreous hemorrhage. Echography revealed tractional retinal detachment as well as vitreous hemorrhage.

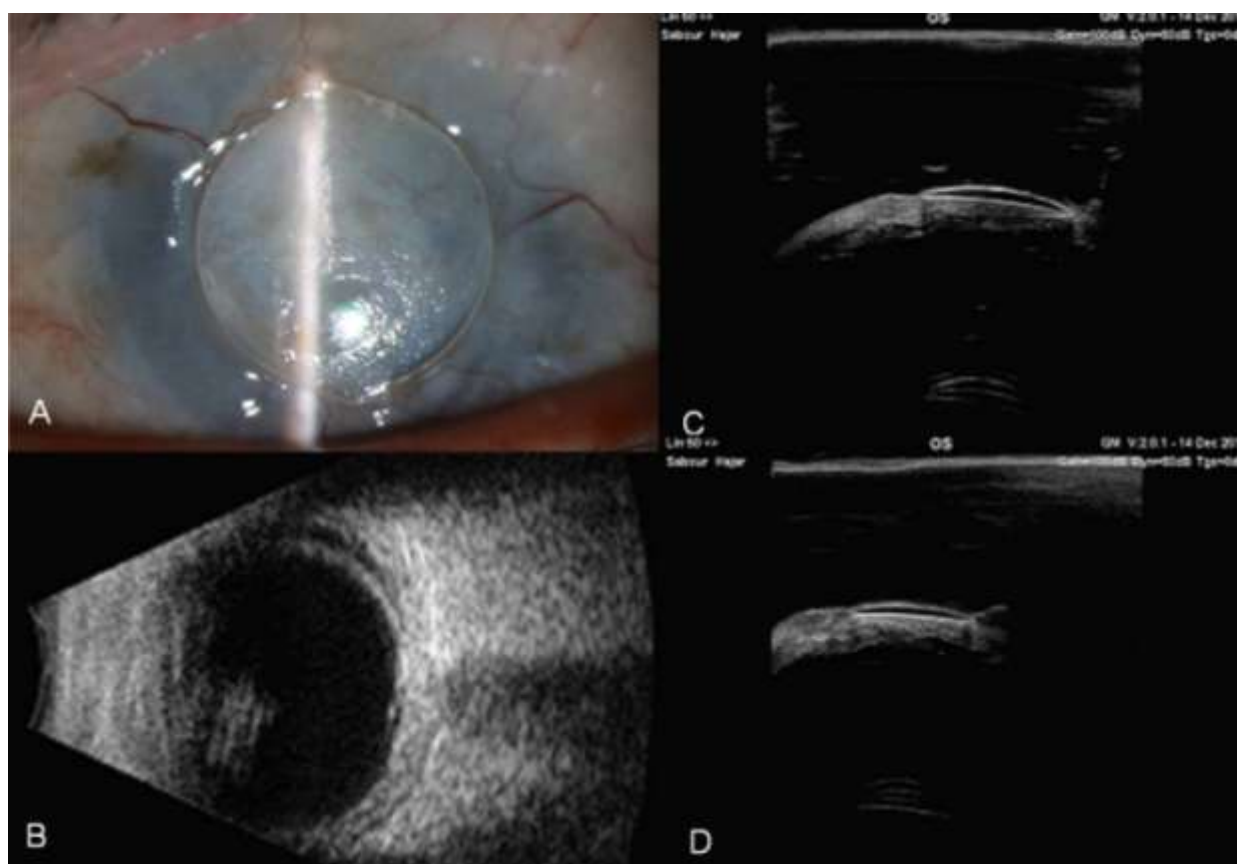
The left eye had no light perception, 4+ RAPD response and surprisingly, an extruded IOL resting on sclerosed cornea, unrelated to the surgical wound scar was noted. Haptics seemed to be dipped into the anterior chamber. She had no complaint about her left eye. Periphery of cornea was vascularized.

Posterior segment of the left eye was not visible, and echography disclosed mild anterior vitreous opacities and a detached retina

(Figure 1. A-D).

She had undergone ECCE of the left eye with a posterior chamber IOL implantation two years ago with a satisfactory vision in early postoperative period. One month after surgery a blunt eye trauma was encountered, leading to NLP vision. Due to poor health-care condition, no detail of her medical record is available. In both eyes ocular pressure was in normal range by tonometry (OD) and tactile (OS).

Deep vitrectomy of right eye and membranectomy with SF6 tamponade was performed. One year after vitrectomy the vision was  $\frac{7}{10}$  in OD and NLP eye in the left eye.



**Figure 1.** Extruded posterior intraocular lens through the cornea in the left eye. A) Slit photo of the left eye with exposed IOL optic on the presumed cornea without any movement or tract formation through the entrapped haptics. The cornea is totally opaque with peripheral vascularization. B) B-scan of the left eye with vitreous opacity in the back of presumed iris tissue with shallow retinal detachment in the superior half of retina. C and D) UBM shows the meniscus of IOL optic on the organized and fibrotic cornea with flat anterior chamber. The course of the haptics appears to reach to the ciliary sulcus. There is no space between optic and corneal surface.

## Discussion

Dislocation of an intraocular lens implant may be complicated by intraocular hemorrhage and endophthalmitis as well as sequela of blunt ocular trauma.<sup>8-11</sup> Although trauma resulting in rupture of the surgical wound is a plausible cause,<sup>2</sup> non-traumatic extrusion due to corneal melting in a patient with rheumatoid arthritis has also been described.<sup>10</sup> Our case was a poorly controlled diabetic patient with a minor trauma history and possible untreated corneal ulcer and gradual exposure and extrusion of IOL through melted cornea. It appears that the optic of the IOL impacted between the ulcerated cornea and the upper lid, probably sealed the wound and allowed healing process under it, much in the same way a contact lens would have as that been reported by Srivastava.<sup>6</sup> Another theory is that after blunt trauma PC-IOL may become completely dislocated anteriorly to the patients cornea and in close contact with corneal endothelium which led to corneal decompensation and melting.

Postoperative corneal melting may be associated with infectious, inflammatory or neurotrophic causes. In this case, the end of haptics is entrapped inside the eye in the sulcus (detected by UBM), while whole optic is firmly lying on the corneal surface without any detectable interface.

## Conclusion

Considering the current position of IOL optic and haptics, the possible mechanism of extrusion in our patient seems to be passing through the melted cornea via a cheese wiring like process.

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