

## Clinical Image

# Traumatic Anterior Dislocation of a Clear Crystalline Lens

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**Keywords:** Luxation; Lens; Trauma

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**Received:** October 03, 2023

**Accepted:** October 28, 2023

**Published:** November 04, 2023

## Case Report

We present a case study of a 41-year-old patient who was admitted to the ophthalmological emergency department complaining of ocular pain and redness following trauma of the right eye. Slit-lamp examination of the right eye revealed visual acuity limited to "counting fingers", diffuse conjunctival hyperemia, anterior dislocation of a clear crystalline lens in the anterior chamber with endothelial contact (Figure 1), and ocular hypertension measured at 35 mm Hg. Medical treatment was swiftly initiated, incorporating both local and systemic hypotensive agents. After the eye pressure has been normalized, the patient underwent phacoemulsification lens extraction with anterior vitrectomy. Postoperative outcome was marked by normalization of intraocular pressure and by the absence of optic nerve and corneal endothelial cell damage.



**Figure 1:** Anterior dislocation of a clear lens with endothelial decompensation.

## Discussion

Crystalline lens dislocation occurs when it becomes detached from its zonal fibres due to an abnormal position of this structure [1]. This can happen as a result of developmental anomalies, degeneration, or traumatic rupture [2] (less commonly). Disruption of the zonular fibers may result in either a partial or complete lens dislocation [2]. Partial dislocation occur ventrally, resulting in a dorsal aphakic crescent. Anterior dislocation of the lens may cause either anterior displacement of the iris if the lens remains in the posterior chamber of the eye. In a complete dislocation, the lens is found completely outside of the hyaloid fossa [3]. Often, the lens is found within the vitreous of the posterior compartment of the eye. Very rarely is it found within the anterior chamber [4,5]. Patients can present with eye pain and visual changes ranging from light distortion to loss of vision [1,4]. If unrecognized or untreated, anterior dislocations can block the anterior chamber and trabecular meshwork causing elevated intraocular pressures, resulting in glaucoma, pupillary block, and corneal edema [1,4]. Therefore, they are considered vision threatening emergencies. Ultrasonography can aid in the diagnosis of all types of lens dislocations and assess for additional ophthalmologic pathology, including retinal detachment and vitreous hemorrhage. The anterior dislocation of the lens represents an ophthalmologic emergency, as it may cause blindness due to acute intraocular hypertension. Its management involves urgent extraction of the dislocated lens under hypotensive treatment.

## Author Statements

### Conflicts of Interest

The authors have no conflicts of interest to declare.

### Sources of Funding

We have any financial sources.

### Consent

Written informed consent was obtained from the parent for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

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