

SHORT COMMUNICATION

Case report

Indirect trauma causing dislocation of the crystalline lens - a case report

LD. JONES, V. SAMPAT, M. HERO

Department of Ophthalmology, University Hospitals of Coventry and Warwickshire NHS Trust, Coventry - UK

PURPOSE. *To report a case of indirect trauma causing dislocation of the crystalline lens in a patient with no underlying risk factors.*

METHODS. *Case report.*

RESULTS. *A 76-year-old woman fell injuring her right temple area. She complained of blurring of vision in her right eye. Her vision was reduced to 6/60. Ocular examination revealed right aphakia associated with complete posterior dislocation of the crystalline lens into the vitreous cavity. No predisposing factors as pigment dispersion or pseudoexfoliation material was found on gonioscopy.*

CONCLUSIONS. *Dislocation of the crystalline lens has been reported following direct trauma. It is known to occur spontaneously in mature and hypermature cataracts and in cases of weak zonules. Our case shows that indirect trauma can cause complete dislocation of the crystalline lens in the absence of any predisposing factors. (Eur J Ophthalmol 2003; 13: 91-2)*

KEY WORDS. *Aphakia, Lens dislocation, Crystalline lens, Ocular trauma*

Accepted: August 29, 2002

A 76-year-old woman presented to the General Emergency Department having sustained a laceration of the right temple following a fall in her front yard and this was sutured. She reportedly mentioned to the Emergency Officer that the vision in her right eye was significantly blurred since the fall. There was no direct injury to her eye and no loss of consciousness reported. She was reassured and discharged. She returned to the Primary Eye-Care Facility a week later.

Her past medical history included chronic hypogammaglobulinemia secondary to excision of a benign encapsulated thymoma 17 years earlier, psoriasis, systemic hypertension and chronic bronchitis. She was maintained on long-term immunoglobulin injections and oral antibiotics.

Examination at this stage revealed right facial abrasions and contusions (Fig. 1). Her best corrected visual acuities were 6/60 in the right and 6/9+3 in the left eye. Slit lamp biomicroscopy of the right eye re-



Fig. 1 - Right facial abrasions and contusions.

vealed aphakia, gonioscopy showed no evidence of pigment dispersion or pseudo-exfoliation. On funduscopy, the clear crystalline lens was found dislocated into

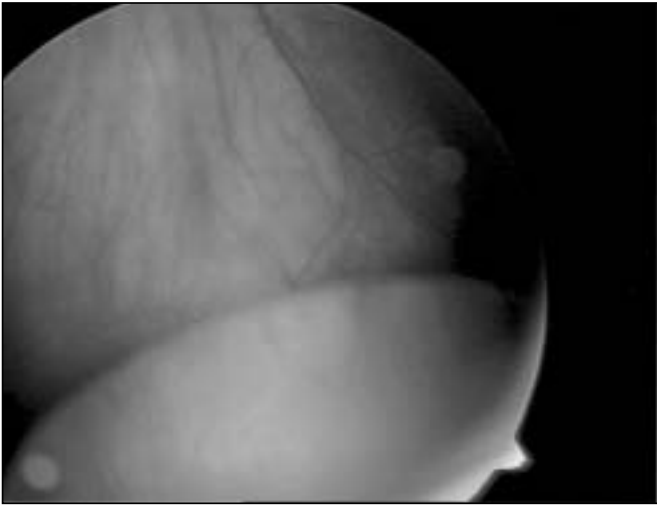


Fig. 2 - Dislocated clear crystalline lens lying on the inferior retina.

the vitreous cavity, lying on the retinal surface inferiorly (Fig. 2). The rest of the posterior segment was unremarkable. The left eye was within normal limits. She was seen by the vitreoretinal service and offered surgical intervention but opted for aphakic contact lens correction.

DISCUSSION

Many causes of crystalline lens dislocation have been described (1). Surgical removal with anterior chamber or scleral fixation posterior chamber intraocular lenses using pars plana vitrectomy is presently the rec-

ommended treatment (2). Anterior segment trauma is a common cause of dislocated crystalline lenses and may be responsible for up to 53% of these cases (3). In the absence of trauma, older patients with cataractous lenses may have them displaced or spontaneously dislocated if the cataract is mature or hypermature (4). Dislocation of the crystalline lens however, occurs mainly after blunt trauma. The pathogenesis of dislocation is thought to be due to blunt trauma applied in the antero-posterior direction of the globe causing shortening in that meridian, with equatorial stretching. This equatorial expansion may cause zonular disruption with resultant dislocation or subluxation (5). Our case showed a quiet white eye without evidence of pseudoexfoliation or history of exposure to vibrations, which may lead to zonular weakness (6). There was no phaco-donesis in the contralateral eye to suggest any zonular weakness (7).

To our knowledge this is the first published case of dislocation of the crystalline lens with no associated ocular problems occurring from indirect trauma.

Reprint requests to:
Mr. Lynval D. Jones
La Geria
104 Codsall Road
Tettenhall, Wolverhampton
WV6 9QJ
West Midlands, UK
lynval@doctors.org.uk

REFERENCES

1. Nelson LB, Maumenee IH. Ectopia Lentis. *Surv Ophthalmol* 1982; 27: 143-60.
2. Omulecki W, Nawrocki J, Sempinska-Szewczyk J, Snyder A. Transcleral suture fixation and anterior chamber intraocular lenses implanted after removal of posteriorly dislocated crystalline lenses. *Eur J Ophthalmol* 1997; 7: 370-4.
3. Jarrett WH. Dislocation of the lens. *Arch Ophthalmol* 1967; 78: 289-96.
4. Bass LJ, Potter JW. A case of spontaneous dislocated lenses. *Am J Optom Physiol Opt* 1985; 62: 352-6.
5. Marcus DM, Topping TM, Frederick AR Jr. Vitreoretinal management of traumatic dislocation of the crystalline lens. *Int Ophthalmol Clin* 1995; 35: 139-50.
6. Xavier M. Vibrations can induce rupture of zonular fibres. *Ophthalmologica* 1987; 194: 86-9.
7. Faisal SJ, Mamalis N, Crandall AS. Spontaneous late dislocation of intraocular lens within the capsular bag in pseudoexfoliation patients. *Ophthalmology* 2001; 108: 1727-31.