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Case Report

Management of traumatic phacocoele

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ABSTRACT

Background: Phacocoele is defined as dislocation of normal crystalline lens into sub conjunctival space through scleral defect after blunt trauma.

Clinical Case: A case of post-traumatic scleral/limbal tear and dislocated normal crystalline lens to the sub-conjunctival space, supero-nasally. On examination the best corrected visual acuity in left eye was finger counting close to face.

Wound exploration with tear repair was done under general anaesthesia under nil visual prognosis, anterior chamber was formed.

Conclusion: Traumatic phacocoele usually occurs due to indirect impact on the globe following blunt trauma and is an emergency condition to be treated as early as possible.

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1. Case Report

Dislocation of normal crystalline lens is a rare occurrence but a known complication after blunt trauma. Phacocoele is defined as dislocation of normal crystalline lens into sub conjunctival space through a scleral defect after blunt trauma.¹ It may or may not be associated with other complications like retinal detachment.

Here we are presenting a case of a 67-year old male patient who had a history of blunt trauma to the left eye with post-traumatic scleral/limbal tear and dislocated normal crystalline lens to the sub conjunctival space, supero-nasally.

On examination the best corrected visual acuity was PL + PR accurate, finger counting close to face (FCCF) in left eye (LE). Right eye vision was 6/24 without glasses

due to refractive error which improved up to 6/6 with correction. On slit lamp examination anterior segment in LE was remarkable.

There was a scleral tear present in the left eye approximately 10-12 mm superiorly with dislocated normal crystalline lens in the sub conjunctival space, supero-nasally.

HypHEMA with shallow anterior chamber, irregular, sluggishly reacting pupil was noted along with few vitreous strands was appreciated in the anterior chamber. Other eye had adherent leucoma.

CT Scan orbit showed absence of crystalline lens from patellar fossa with vitreous haemorrhage or inflammatory reaction. No evidence of retinal detachment was noted.

Systemic evaluation including X-Ray orbit was within normal limit. A diagnosis of post traumatic scleral tear with phacocoele was made in the left eye. Under general

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anaesthesia, left eye wound exploration was done with infusion to avoid collapse of eye ball. Repair of the tear was done and anterior chamber was formed. Visual prognosis was explained to the patient and informed written consent was obtained for the same.

Scleral tear was sutured with 6-0 vicryl suture and conjunctiva repositioned with 7-0 vicryl suture. Patient was left aphakic and was kept on conservative treatment for 2 weeks including oral steroids like tablet Prednisolone (as per body weight) in tapering doses with tablet Pantoprazole and analgesics with serratiopeptidase followed by topical steroids like Prednisolone eye drops, topical antibiotic eye drops Moxifloxacin, Homatropine eye drops and lubricating eye drops, topical non steroidal anti inflammatory eye drops (NSAIDs) were administered.

On follow-up after 2 weeks the best corrected visual acuity was 6/24 with +11.00 D, IOP was 16 mm Hg. The anterior segment was carefully examined for any retained nuclear lens fragment, which may later lead to inflammation and require surgical removal. B- Scan showed resolved choroidals, therefore same treatment was continued and the patient was called after 2 weeks. Subsequent follow up showed resolution and improvement.

The patient was then counselled and planned for secondary Intra Ocular Lens implantation after another 2 weeks of follow up. Scleral Fixated Intra Ocular Lens was implanted.

The unaided visual acuity after 1 week following lens implantation was 6/18 which was best corrected upto 6/9. Patient was kept under regular follow up every month for next 3 months.

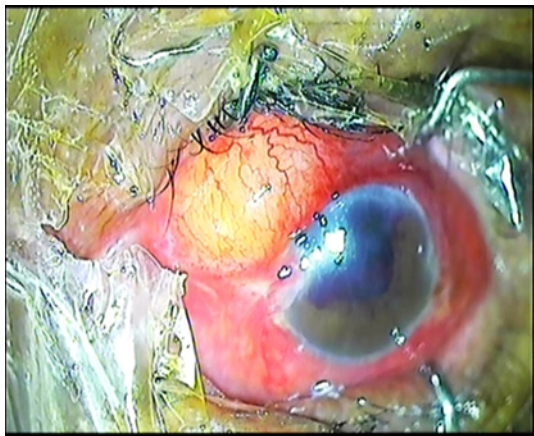


Fig. 1: Dislocated lens in sub conjunctival space supero nasally (LE)

2. Discussion

The first case of phacocoele was reported in 1928 by Fejer, due to blunt trauma.² Phacocoele has been reported to comprise 13% of all lens luxations.³ A study by Yudrakul et

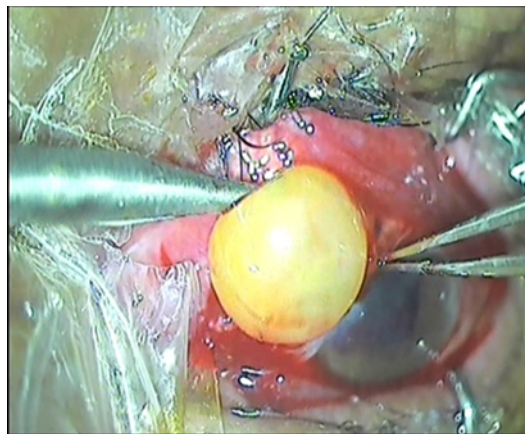


Fig. 2: Excision of the lens matter

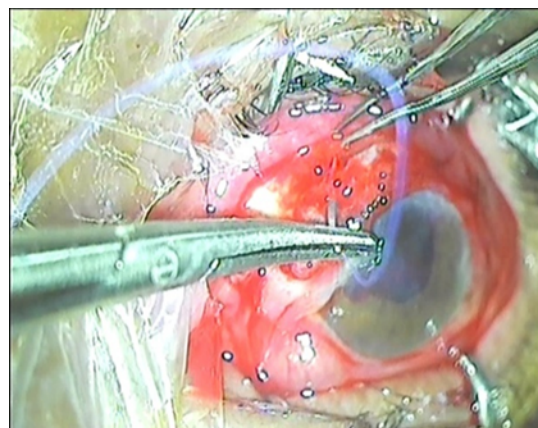


Fig. 3: Suturing of the wound

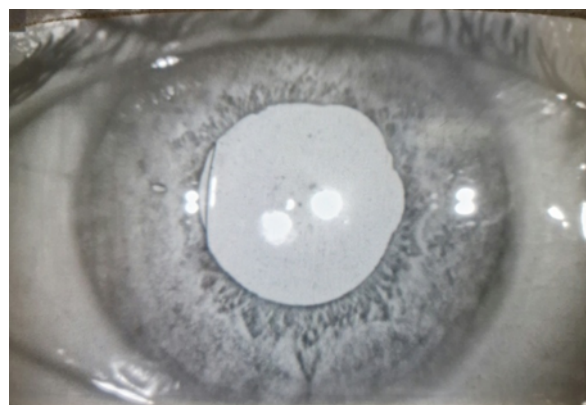


Fig. 4: Final post op picture taken after suture removal showing stable implanted IOL

al. also reported similar dislocation of lens in supero nasal quadrant.⁴ Another study by Charan & Mathur reported inferior dislocation of lens.⁵ Kramer et al. reported supero temporal dislocation.⁶ Magnante et al. first described a case of peribulbar anaesthetic injection for cataract surgery that resulted in a sclera laceration & lens extrusion in superior quadrant.⁷

Phacocoele is mostly seen in young people who are victims of blunt trauma with rigid sclera and hard crystalline lens.⁸ The predominant site of indirect scleral rupture is the superonasal quadrant followed by the superotemporal quadrant.⁹ The scleral rupture frequently occurs between the limbus and spiral of Tillaux.^{10,11}

Predisposing factors include previous surgical or traumatic scleral scar, recurrent episodes of scleritis, and others. Vitreous hemorrhage and retinal detachments may accompany these cases.¹² The primary goal in the management of a phacocoele is the extraction of the displaced lens and maintenance of globe integrity.^{13,14}

Wound exploration under infusion port placement is advisable as the first approach in the surgery to avoid eye collapse while manipulating the lens near the injury in the sclera. Scleral tear repair followed by anterior vitrectomy is advised.

Scleral fixation of IOL should be performed by creating scleral pockets as most of these cases have a corneal compromise and inadequate capsular bag support.¹⁵ Cohen reported that primary IOL implantation results in a difference of refraction of 4 dioptres on using biometry of the non-traumatic eye, whereas Chuang and Lai emphasised in deviation of refraction of only 1 dioptre in secondary IOL which concludes secondary IOL is much better than primary IOL.¹⁴

In our case the dislocation of crystalline lens was in supero nasal quadrant, which was surgically managed for a better post-operative outcome. As in this particular case, Intraocular Lens (IOL) implantation was planned to a later session depending on the situation of the eye.

3. Conclusion

Traumatic phacocoele usually occurs due to indirect impact on the globe following blunt trauma. The supero nasal quadrant is most common site of dislocation. The most common victims of blunt trauma are young individuals and also elderly people, phacocoele is seen much more frequently at this age because of the increased scleral rigidity and hard crystalline lens as compared to children who have softer crystalline lens and with greater elasticity of outer coats of eyeball. It is an emergency condition and is to be treated as early as possible for best visual outcome.

4. Source of Funding

None.

5. Conflict of Interest

None.

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