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Case Report

A rare case report of traumatic phacocele

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ABSTRACT

A 67-year-old woman visited our facility and complained of right eye pain, redness, and sudden loss of vision. There was history of blunt trauma to right eye by goat horn 25 days before. Visual acuity of light perception was present in right eye. On slit lamp examination, right eye revealed a clearly defined mass in subconjunctival space close to the limbus with scleral rupture. Anterior chamber was irregular in depth with vitreous stands in anterior chamber. Clinically there was aphakia. The patient was diagnosed with right eye traumatic phacocele and scheduled for surgical excision of the crystalline lens with scleral wound repair. A blunt injury may cause an indirect scleral rupture, which would then cause the crystalline lens to dislocate in the subtenon or subconjunctival area. Phacocele, a rare ocular manifestation of blunt trauma caused by indirect scleral rupture of the globe, is one of a number of ocular manifestations of blunt trauma. In this case, the cataractous lens was dislocated in the subconjunctival space due to indirect trauma from a goat horn, without any precipitating conditions.

Keywords: Phacocele, Lenticele, Blunt trauma, Scleral rupture

INTRODUCTION

Phacocele, a rare ocular manifestation of blunt trauma caused by indirect scleral rupture of the globe, is one of a number of ocular manifestations of blunt trauma. Because of its liquid composition, an incompressible sphere-like behaviour of the eye has been reported.[1] Therefore, a blunt injury of sufficient severity can cause an eyeball to rupture at the point of impact (direct) or elsewhere (indirect). The crystalline lens is dislocated into the subconjunctival or sub-tenon's region due to this indirect scleral rupture.

Phacocele is a phrase that comes from the Greek words "phaco" for lens and "kele" for hernia. Phacocele, also known as a lenticele, is the term for the displacement or herniation of crystalline lens from the scleral rupture into the subconjunctival area.[2] Phacocele is an uncommon condition resulted by severe blunt trauma. Because the bony orbit, which is inclined towards the superior nasal region where the globe collides with the trochlea and the orbital wall, is unprotected, impact typically occurs in the inferior temporal sector of the eye globe. This area is typically where ocular ruptures occur. In this case, the cataractous lens was dislocated in the superonasal subconjunctival area due to indirect trauma from a goat horn, and there were no precipitating conditions.

CASE REPORT

A 67-year-old woman visited our facility and complained of right eye pain, redness, and sudden loss of vision. There was history of blunt trauma to right eye by goat horn 25 days before. There was no significant ocular or systemic history.

An examination revealed a visual acuity of light perception in her right eye and 5/60 in her left eye.

The right eye's intraocular pressure was 7 mmHg and the left eye's was 13 mmHg. On slit lamp examination, right eye revealed a clearly defined yellowish mass in subconjunctival space located in the superonasal bulbar conjunctiva close to the limbus (Figure 1) with scleral rupture about 7 mm near the superior limbus with iris prolapse. Anterior chamber was irregular in depth with vitreous stands in anterior chamber. The pupil was jet black and irregular. Clinically there was aphakia. Indirect ophthalmoscopy revealed vitreous hemorrhage.

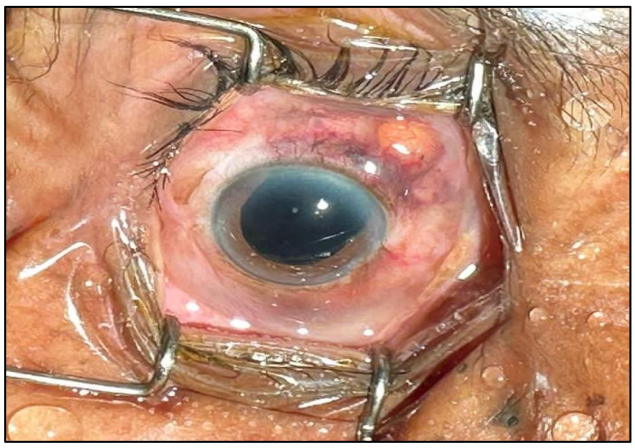

Figure 1: Yellowish mass in superonasal subconjunctival space corresponding to dislocated lens.

The patient was diagnosed with right eye traumatic phacocele and scheduled for surgical excision of the crystalline lens with scleral wound repair. The superonasal peritomy was performed and dislocated subconjunctival cataractous lens was removed (Figure 2). A 7 mm long anterior scleral rupture with iris prolapse, of the superior perilimbal area was noted. An anterior vitrectomy was performed and abscission of prolapsed iris tissue was done. The scleral rupture was repaired by a 10-0 nylon suture (Figure 3). The possible need for a secondary scleral fixated intraocular lens was kept in mind. Subsequently, the patient was treated with and topical antibiotic with steroids and cycloplegic.

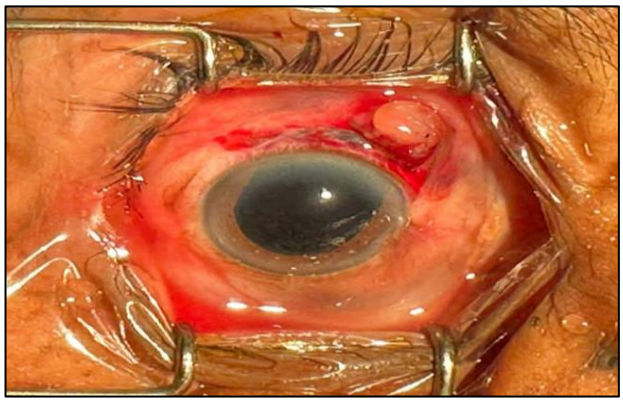

Figure 2: Extraction of the dislocated lens with 7 mm long scleral rupture.

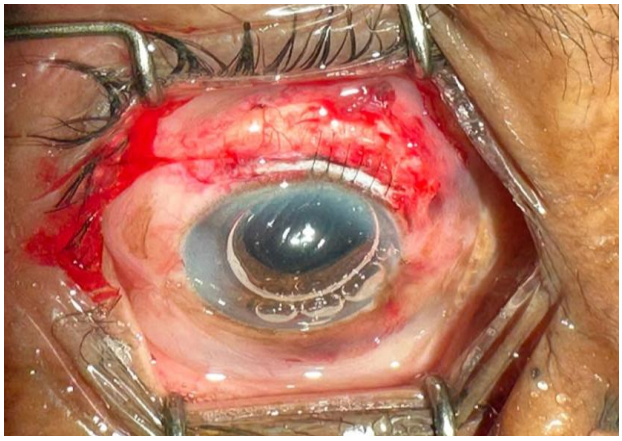

Figure 3: Perilimbal scleral rupture repair with 10-0 nylon suture.

DISCUSSION

Fejér reported phacocele for the first time in 1928.[2] The superonasal area is the most common site of indirect scleral rupture, then the superotemporal.[1,3] Between the limbus and the Tillaux spiral, scleral rupture frequently occurs.[4,5] According to Arlt's theory, blunt trauma reduces the diameter in the line of impact and, as a result, induces an increase in the diameter of the equator to this line.[2]

Few reports of phacocele have been published, and the majority of those that have are linked to a past history of scleral compromise-usually trauma or surgery. Predisposing factors for subconjunctival dislocation of the lens after trauma (even of mild intensity) include hard lenses due to ageing or cataracts, increased scleral rigidity from ageing or chronically high IOP, and weakening pathologies in the eyeball like a surgical scar, recurrent scleritis.

It usually occurs in elderly above 40 years as a well-formed crystalline lens and rigid sclera are said to be prerequisites for the same, but has been reported even in a child as young as 11 years.[2,6]

In our situation, cataractous lens was dislocated in the superonasal subconjunctival area due to indirect trauma from a goat horn with no precipitating conditions.

The basic goal of phacocele care is to retrieve the misplaced lens while maintaining globe integrity.[7] The wound should be carefully examined; the crystalline lens must be removed from the underlying vitreous, and the scleral rupture should be repaired.

CONCLUSION

To summarize, in cases of acute-onset subconjunctival cysts following blunt trauma, a high index of suspicion for phacocele should be kept in mind. For the best visual result, it is best to remove the lens and carefully repair the

scleral defect as soon as feasible, followed by visual rehabilitation.

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