



## Traumatic phacocele- A Rare Case Report

### OPHTHALMOLOGY

**Dr. Rashmi Kumari** Senior Resident RIO, IGIMS PATNA

**Dr. Bhawesh Chandra Saha** Senior Resident AIIMS. PATNA

**Dr Bibhuti Prasanna Sinha** Professor and HOD, RIO, IGIMS, PATNA

**Dr.Santosh kumar** Junior resident, RIO, IGIMS, PATNA

### ABSTRACT

Blunt trauma can result in indirect scleral rupture with subsequent dislocation of the crystalline lens in the subconjunctival or subtenon space. There are evidences that timely and effective intervention can ensure good visual recovery. Blunt trauma has protean ocular manifestations with phacocele being a rare event, resulting from indirect scleral rupture of the globe. The eye has been described to behave like an incompressible sphere because of its liquid contents. Hence, blunt trauma of sufficient magnitude can result in rupture of the eyeball either at the site of impact (direct) or in a remote area (indirect). This indirect rupture of sclera leads to dislocation of the crystalline lens into the subconjunctival or subtenon space. We report a patient with traumatic phacocele with an aim to evaluate the clinical presentation, management and visual outcome.

### KEYWORDS:

Blunt trauma, phacocele, scleral rupture

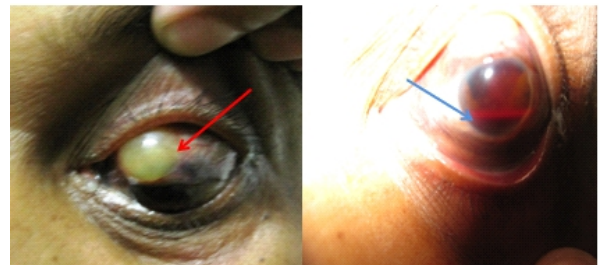
### CASE REPORT

A 55 years old woman presented in our emergency out patient department(OPD) with complains of sudden profound diminution of vision in her left eye since last night following trauma due to domestic violence. On ocular examination, visual acuity was unaided 6/6 :N12 in right eye(RE) and positive light projection with inaccurate projection of rays in left eye (LE). Mild Ptosis was present in LE due to lid edema. Pupil was well reacting in RE but dilated and fixed in LE. Gross examination with diffuse illumination showed yellowish subconjunctival mass in the superior quadrant in LE, evident more on down gaze, while the RE was normal. (Figure 1)



**Fig.1. Gross examination of eyes**

On slit lamp examination LE showed presence of a well-delineated yellowish subconjunctival mass, 1.2cmx1.0 cm, at 12 o'clock, aphakia with deep anterior chamber, hyphaema and inflammatory membrane. Bulbar conjunctiva and cornea were intact. Detailed slit-lamp biomicroscopic examination revealed normal fundus in RE with poor fundal glow in LE. (Fig.2)



**Fig 2. Lens in subconjunctival space (red arrow), blood in anterior chamber (blue arrow)**

Gentle B-scan ultrasonography of LE showed absent lens echoes in the patellar fossa with low to moderate amplitude echoes in the vitreous cavity suggestive of vitreous haemorrhage or inflammatory debris.

Exploration and surgical repair of ruptured sclera along with lens removal and anterior vitrectomy was performed. (Fig 3)



**Fig.3 Lens extraction by peritomy**

The decision of intraocular lens implantation with scleral fixation was done at the time of surgery. Visual acuity on first post operative

day was 2/60 which improved to 6/60 unaided at one month and BCVA of 6/18 at 3 months.

## DISCUSSION

Phacocele has been reported to comprise 13% of all lens luxations.<sup>1</sup> It was first reported by Fejér in 1928.<sup>3</sup> The predominant site of indirect scleral rupture is the superonasal quadrant<sup>4</sup> followed by the superotemporal quadrant.<sup>2</sup> The scleral rupture frequently occurs between the limbus and spiral of Tillaux.<sup>2</sup>

In the present case, phacocele was in the superior quadrant. However, Charan and Mathur<sup>6</sup> reported inferior displacement and Krámar *et al.*<sup>7</sup> reported superotemporal displacement of lens following blunt trauma. Subconjunctival luxation of crystalline lens is very rare in children due to elasticity of outer coats of the globe and softer crystalline lens. The authors encountered superior luxation of partially absorbed lens following blunt trauma with a coconut leaf broom in a child of 11 years. This result is therefore not in agreement with the conclusion of Fejér<sup>3</sup> that phacocele occurs exclusively in the elderly beyond 40 years of age. In that child, the scleral rupture occurred in the internal scleral sulcus region. The authors feel that the inherent weakness of this zone due to the presence of Schlemm's canal and the perforating blood vessels might have predisposed the child to phacocele.

In conclusion we would like to emphasize that though the most common victims of blunt trauma are young individuals, phacocele is seen much more frequently at a later age because of the increased scleral rigidity and hard crystalline lens. This study provides evidence that timely and effective intervention can ensure good visual recovery.

## References

1. McDonald PR, Purnell JE. The dislocated lens. JAMA. 1951;145:220-6.
2. Cherry PM. Indirect traumatic rupture of the globe. Arch Ophthalmol. 1978;96:252-6.
3. Fejér AJ. Subconjunctival lens dislocation. Am J Ophthalmol. 1928;11:254-6.
4. Lister W. Some concussion changes met with in military practice. Br J Ophthalmol. 1924;8:305-18.
5. Yurdakul NS, Ugurlu S, Yilmaz A, Maden A. Traumatic subconjunctival crystalline lens dislocation. J Cataract Refract Surg. 2003;29:2407-10.
6. Charan H, Mathur GB. Subconjunctival dislocation of lens: A case report. Int Surg. 1969;52:115-6.
7. Krámar PO, Brandt DE. Subconjunctival dislocation of the lens. Arch Ophthalmol. 1976;94:110-1.