



## Case Report

## Phacolytic glaucoma mimicking Endophthalmitis

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## ABSTRACT

Phacolytic glaucoma is one of the varieties of various lens induced glaucoma, also known as lens protein glaucoma is a sequelae of hypermature cataract. In our case 60 years old male presented with lid edema, pain, redness, loss of vision of right eye with exudates or fluffy deposits in the anterior chamber mimicking endophthalmitis. Endophthalmitis is infection of eye involving aqueous and vitreous humors with exudates in vitreous cavity. Here we report a cytology proven case of lens induced glaucoma managed with phacoemulsification and intraocular lens implantation followed by good visual outcome. This case highlights the importance of right and early diagnosis.

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## 1. Introduction

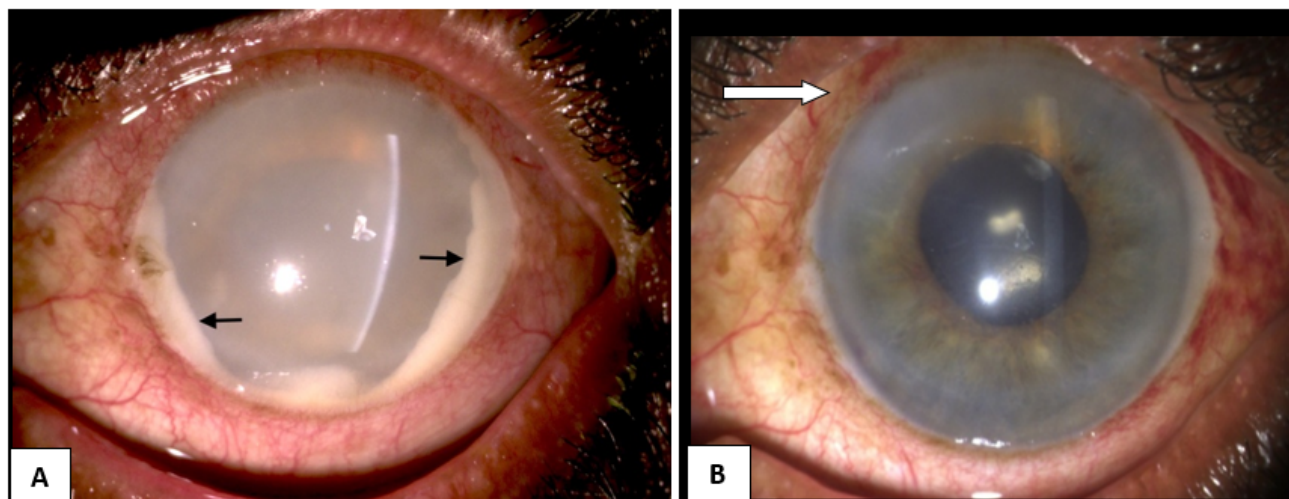
Phacolytic glaucoma (PG) is characterized by an acute rise in Intraocular pressure (IOP) associated with aqueous flare and cells, in eyes with advanced cataract. The pathogenic mechanism is micro leakage of high molecular weight lens proteins through an intact anterior lens capsule causing an inflammatory response and deposition of proteins, protein laden macrophages and inflammatory debris in the trabecular meshwork.<sup>1</sup> Endophthalmitis is the inflammation secondary to infection of tissues and fluids inside the eye lead to acute painful red eye, lid edema, loss of vision, intense vitritis, exudates in the vitreous cavity, hypopyon with absent red glow of fundus. Endophthalmitis may be exogenous or endogenous in origin. Exogenous endophthalmitis occur post surgery or trauma. Endogenous endophthalmitis occurs secondary to some infective foci in the body and spread through blood stream. Risk factors are diabetes mellitus, HIV, use of immunosuppressants, intravenous drug use.<sup>2</sup>

## 2. Case Report

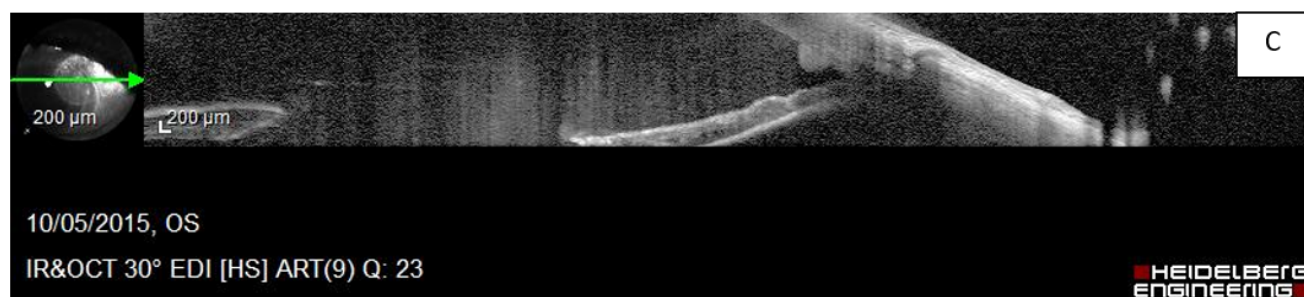
80 years-Indian-male presented with complaints of low vision, pain and redness in left eye for 20 days. There was no history of trauma, surgery, intravenous drug use and any systemic illness. Visual acuity was perception of light and intraocular pressure was 56 mm of Hg in left eye. On slit lamp examination conjunctival congestion, diffuse corneal oedema, deep anterior chamber, whitish fluffy deposits in the anterior chamber lying along the back surface of cornea as well as in angles with mature cataract (Figure 1A). Details of posterior segment were not visible. Anterior segment OCT scan right eye shows deposits on the back surface of cornea in the angle of anterior chamber (Figure 2C). Ultrasonography revealed normal posterior segment. Normal posterior segment on ultrasonography rules out the possibility of endophthalmitis. Right eye was pseudophakic with visual acuity of 6/9. Keeping in view the possibility of phacolytic glaucoma, phacoemulsification and intraocular lens implantation was done. Patient re gained visual acuity of 6/9 post operatively (Figure 1B). Gram and KOH stain negative for the fluid aspirate. Cytological examination of anterior chamber aspirate shows plenty of foamy and pigment laden macrophages in a background of pinkish amorphous proteinaceous materia l; features were

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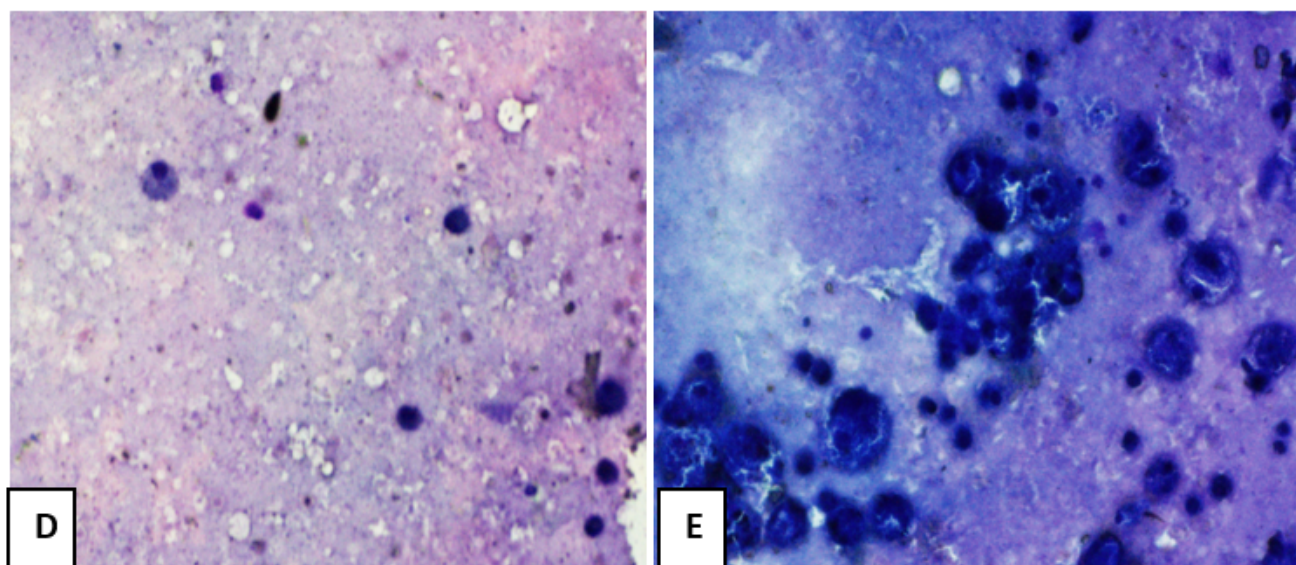
E-mail address: [drmanu.sharma26@gmail.com](mailto:drmanu.sharma26@gmail.com) (M. Sharma).



**Fig. 1:** **A:** Shows Preoperative photograph with conjunctival congestion, corneal edema, exudates in anterior chamber (black arrows) mid dilated pupil and cataract. **B:** Shows postoperative photograph with clear cornea, clear anterior chamber and posterior chamber intraocular lens



**Fig. 2:** **C:** Anterior segment OCT scan shows deposits along the posterior surface of cornea. (white arrow showing deposits)



**Fig. 3:** **D:** Geimsa staining: Macrophages in a pinkish amorphous background. **E:** Clumps of macrophages under higher magnification (40X)

consistent with phacolytic glaucoma (Figure 3 D, E).

### 3. Discussion

Phacolytic glaucoma is described as obstruction of trabecular meshwork by lens protein or macrophages that have leaked through a grossly intact capsule of a mature or hypermature cataract. There can be spontaneous or nontraumatic capsular defects.<sup>1,3</sup>

It is an acute condition which present clinically as corneal edema, cellular exudates in the anterior chamber often with hypopyon, polychromatic hyper refringent or crystalline particle in the anterior chamber and a hypermature cataract behind a semi dilated pupil with open angle.<sup>4</sup> In phacolytic glaucoma of short duration and early presentation, the glaucoma is seen to be resolve following lens extraction alone, with mild inflammation and raised intraocular pressure.<sup>5</sup> Presence of inflammation, giant cells around the lens material i.e. macrophages and histiocytic response in the cellular aspirate from the anterior chamber confirm the diagnosis of phacolytic glaucoma.<sup>1</sup> Pre surgical management is to lower the IOP using topical beta-blockers, topical and systemic carbonic anhydrase inhibitors and to reduce inflammation with topical cycloplegics and steroids.<sup>3</sup> In the rural population, late treatment of cataract and ignorance of disease lead to these serious complications like lens induced or phacolytic glaucoma and subsequently irreversible loss of vision. Definitive treatment is removal of cataractous lens which lead to resolution of symptoms and early recovery of vision.

### 4. Conclusion

This case highlights the importance of early diagnosis and treatment of visually disabling cataract. There is a need to spread awareness about the dangers of lens-

induced glaucoma. In our case early diagnosis and timely management lead to good visual outcome.

### 5. Source of Funding

None.

### 6. Conflict of Interest

None.

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