

## Case report

# Corneal stromal pseudohypopyon in a pseudophakic patient

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### Abstract

**Background:** Corneal stromal pseudohypopyon is a rare entity. **Case:** A 65-year-old female developed a suture abscess in her pseudophakic right eye, three years after conventional extra-capsular cataract extraction with posterior chamber intraocular lens implantation. Pus from the suture abscess tracked down the corneal stromal layers and formed a pus level leading to the appearance of a corneal intra-stromal pseudo-hypopyon. **Conclusion:** This case is unique due to its unusual clinical presentation and highlights the fact that corneal pseudohypopyon may occur without any associated anterior chamber hypopyon or Descemet's detachment.

**Key-words:** Corneal stromal pseudohypopyon, pseudophakic, suture abscess

### Introduction

Collection of pus, resembling a hypopyon (pseudohypopyon), in the corneal stromal layers is uncommon. We report a rare case of corneal stromal pseudohypopyon in a pseudophakic patient, three years after she underwent cataract surgery in her right eye.

### Case report

A 65-year-old female residing in a rural area of North India presented to our tertiary care referral institution with a one and a half month history of diminution of vision in her right eye, associated with pain, redness, foreign body sensation and mucopurulent discharge. She had undergone cataract surgery (extracapsular cataract extraction with posterior chamber intraocular lens implantation) in her right eye, three years ago. The post operative period had been uneventful with gain in vision in the operated eye, as stated by the patient. There were however no records of the post operative best corrected visual acuity (BCVA) in her right eye.

At presentation to our centre, her right eye was pseudophakic and left eye had immature cataract. The BCVA was counting fingers at one meter (FC-1 m) with accurate projection of rays and perception of light in the right eye, and 20/200 in the left eye.

On examination of the right eye, the upper and lower lids were edematous, with matting of the eyelashes due to muco-purulent discharge. There was diffuse conjunctival congestion with peri-limbal injection. The corneal epithelium was intact. There was generalized corneal epithelial and stromal edema. Three sutures (8-0 silk) were present at the limbus from the 10-2 ° clock position. There was a suture abscess at the 2 ° clock suture, with pus trickling down in the corneal stromal layers. Pus level was visible within a cavity which had formed in the mid to deep corneal stromal layers, forming a corneal pseudohypopyon of approximately 2.5 millimeter height (Figure-1). There was no anterior chamber hypopyon. Although posterior details were obscured, the posterior chamber intraocular lens appeared to be in place. Fundus could not be visualized due to corneal haze and presence of

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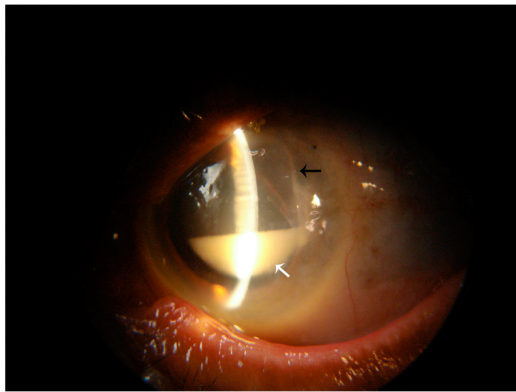
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pseudohypopyon. The intraocular pressure in the right eye was 22 mm Hg when measured with Goldmann's applanation tonometry.

Examination of the left eye was unremarkable, except for the presence of an immature cataract. The intraocular pressure in the left eye was 16mm Hg (Goldmann's applanation tonometry).

**Figure 1- Slit lamp photograph showing pus track in corneal stroma (black arrow) and corneal stromal pseudohypopyon (white arrow).**



The general physical examination of the patient was within normal limits. Hemogram was normal, except for elevated erythrocytic sedimentation rate (ESR) (Corrected value- 36mm/hour).

Corneal scrapings from the suture abscess were sent to microbiology for gram staining, culture and antibiotic sensitivity. Gram staining revealed gram positive cocci. Culture (reports obtained at 48hours after inoculation; after the patient was lost to follow up) produced a light growth of *Staphylococcus aureus* sensitive to ciprofloxacin and gatifloxacin, but resistant to chloramphenicol.

After sending the corneal scrapings, the patient was started on hourly topical gatifloxacin 0.3% eye drops, atropine 1% eye drops twice daily, timolol maleate 0.5% eye drops twice daily and gatifloxacin 0.5% eye ointment at night, all in the right eye. She was advised admission for suture removal with drainage of the pseudohypopyon in her right eye. However, she did not get admitted for the procedure or report for follow up. Hence the response to therapy could not be evaluated and no further

intervention could be done.

## Discussion

Pseudo-hypopyon or collection of fluid/pus within the corneal stromal layers resembling a hypopyon is rare. Singh (1996) has reported four cases of bullous separation of the Descemet's membrane that occurred one to seven years after cataract surgery. In all four cases, pseudohypopyon filled the space created by the separation. There is also a reported case of double hypopyon (Singh, 1996) secondary to *Pseudomonas aeruginosa* keratitis, in a patient with long standing rubeotic glaucoma where a hypopyon was present along with an intrastromal pseudohypopyon. On pubmed search, other than the above two case reports, we could not find a case of corneal pseudohypopyon, resembling the present case.

The present case report is unique due to various reasons. A pseudophakic patient developed a suture abscess approximately three years after undergoing cataract surgery in her right eye. Pus from the suture abscess, tracked down in the stromal layers to form an intrastromal corneal pseudohypopyon. The corneal epithelium and endothelium were intact. There was no associated Descemet's detachment as occurred in the case reported by Singh (1996). There was also no evidence of associated corneal ulceration and hypopyon as reported by Osborne (2005). This case highlights the fact that corneal stromal pseudohypopyon, secondary to suture abscess is a real entity.

## References

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