

Phacolytic glaucoma- a case report

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Abstract

Introduction: In India cataract is major cause of blindness with significant number of mature and hypermature cataracts. Phacolytic glaucoma (PG) is form of lens induced glaucoma (LIG). In present case study an attempt is made to describe the clinical features and management of PG. **Case summary:** A sixty five years old male patient with complaints of diminution of vision (DOV) with redness, severe eyeache, watering in left eye with left sided headache since 11/2 month. Clinically he was having signs of PG. **Management and outcome:** Initially inflammation and intraocular pressure (IOP) was controlled with medicines and then operated with “manual small incision cataract surgery (MSICS) with trabeculectomy”. At 6 weeks eye was quiet with BCVA 20/80 and IOP 16.2mmhg. **Conclusion:** Early diagnosis and treatment is important. Control of inflammation and IOP followed by MSICS with or without trabeculectomy is the treatment for PG.

Keywords: Phacolytic glaucoma, lens induced glaucoma, manual small incision cataract surgery, cataract.

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INTRODUCTION

In India cataract is major cause of blindness with significant number of mature and hypermature cataracts. Few of them develop lens induced glaucoma (LIG). Phacolytic glaucoma (PG) is one of the forms of LIG. More than a century has elapsed since Gifford first described glaucoma due to hypermature cataract. PG typically occurs in elderly patients. In PG liquefied cortical matter leaks from intact lens capsule. As it is a foreign material to immune system, it induces inflammation. Leaked cortical matter with inflamed trabecular meshwork causes raised intraocular pressure (IOP). PG has violent onset associated with watering, pain and marked DOV. Eye is inflamed with corneal

edema and compromised endothelium. Anterior chamber (A/C) is deep and may contain pseudohypopyon with clumps of cortical matter which can mimic fungal hypopyon. Lens is hypermature with compromised zonular support.⁵ This all makes management of these cases difficult. Management includes control of inflammation and IOP followed by cataract extraction with or without trabeculectomy.¹

CASE SUMMERY

A sixty five years male patient presented on 8/02/09 with complaints of DOV associated with intermittent severe eyeache, watering in LE with left sided headache since 45 days. Pain was severe and continuous pain since last 15 days. On examination he was having CCC, corneal edema+++ , 1/4chamber hypopyon+ with thick floppy exudation close to endothelium at 4 O clock close to angle, cells++. A/C was deep. Pupil was middilated fixed with exudative material in papillary area+. Hypermature cataract with phacodonesis was present. Vision was ?PL, Patient was diagnosed as PG with another differential diagnosis of fungal endophthalmitis (less likely as epithelium was intact).



Figure 1: Pre operative- Phacolytic glaucoma.



Figure 2: post operative day 7



Figure 3: Post operative day 21

MANAGEMENT

Patient was given tablet Prednisolone 40mg OD with Ciprofloxacin 500mg BID. Locally he was given Gatifloxacin with Dexamethasone eye drop (e/d) 1 hourly with Natamycin eye drop 6 times, Betoxalol e/d TID along with ointment of Atropine and antibiotic steroid at night. Patient was followed up on 12/02/09. Patient was better symptomatically. His congestion, corneal edema, A/C reaction, Hypopyon was decreased with no floppy exudates. IOP was 57.2mmhg. His vision was PLPR, rest findings were the same. Natamycin e/d was discontinued and Acetazolamide tablet 250 mg bid was added. He was followed up on 21/02/09. There was no congestion, corneal edema was decreased. A/C had hypopyon with exudates in pupillary area, hypermature cataract with phacodonesis was present. Vision was PLPR. He was advised cataract with glaucoma surgery and operated for the same on 21/02/09. (Image 1)

PROCEDURE

Patient was operated with MSICS with PCIOL with trabeculectomy under peribulbar anesthesia. Superior scleral tunnel of sufficient length formed. Sphincterotomy was done. During capsulotomy care was taken to minimize stress on zonules. Envelope capsulotomy was done of sufficient size and nucleus was taken to anterior chamber and then directly delivered by viscoexpression avoiding any contact with corneal endothelium. Small nucleus size made delivery easier. Intraocular lens (IOL) was inserted in the bag. Capsulotomy completed. Trabecular meshwork was cut with trabeculectomy punch. Patency of passage checked. A/C was maintained deep during surgery with viscoelastic solution. A/C formed with air. Subconjunctival injection of Gentamycin with Dexamethasone is given. Antibiotic steroid ointment with pad applied. On 1st postoperative day findings were - minimal conjunctival congestion with shallow bleb, minimal corneal edema with A/C cells + with streak hyphaema, pupil was mid-dilated with sphincterotomy, PCIOL was in situ. On fundus examination superficial retinal hemorrhage was seen superior to disc with minimal disc pallor and hard exudates at macula. Vision

was 20/200 in Snellen's V/A chart. Tab ciprofloxacin 500mg with NSAID given for 3 days. IOP lowering medicines were discontinued, rest of the treatment was continued. At 7th postoperative day, eye was quiet with clear cornea, A/C was clear with IOL in situ. BCVA was 20/80p. Minimal subconjunctival hemorrhage was present at operation site. Prednisolone was tapered slowly. Atropine was continued for 3 weeks. (Image 2) At 3 weeks postoperative eye was quiet with vision 20/80. Patient was continued on antibiotic steroid e/d and ointment till 6 weeks. (Image 3) At 6 weeks eye was quiet with BCVA was 20/80 with IOP of 16.2mmhg.

DISCUSSION

In India cataract surgery is delayed due to social and economic factors.^{1,4,5} Common belief that cataract needs to be mature before surgery along with fear of surgery and post operative visual outcome amongst the patients are major factors. S Avachat found mature cataract in 57% and hypermature cataract in 11.5% of patients.² IN Raizada, found hypermature cataract in 7.1% of patients.³ In present case, patient had symptoms since 11/2 month. After clinical examination he was diagnosed as Phacolytic glaucoma. Initially Inflammation and intraocular pressure was controlled with medicines. And once the inflammation was controlled patient was operated for MSICS with trabeculectomy. As the cause of inflammation and raised IOP is liquefied cortical matter from hypermature cataract, patient was operated at the earliest to remove cortical matter from the eye. While operating minimal tissue handling was done mainly protecting the corneal endothelium. During postoperative period inflammation was controlled with steroids. As trabeculectomy was performed IOP lowering medicines were not required. Studies by Venkatesh R, Geoffrey Tabin and Natchiar G proved that MSICS is a better option for management of hypermature cataract.^{1,7,8} If IOP is more than 31mmhg trabeculectomy has to be performed. Differential diagnosis for PG includes fungal or bacterial endophthalmitis, neovascular glaucoma.⁶

CONCLUSION

PG has typical clinical features. Diagnosis of PG is important and it can be treated with good results. Control of inflammation and IOP pre and postoperatively with timely surgical intervention can save the eye and patient can gain better vision. MSICS with or without trabeculectomy is a better surgical option. Tissue respect during surgery is important.

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