



INTRAOPERATIVE, POSTOPERATIVE COMPLICATIONS AND VISUAL OUTCOME IN CASES OF POST-VEITIC CATARACTS

Dr Santosh policepatil¹, Dr Shruti^{*2}

¹MECC, bidar, Email - santoshpolicepati@gmail.com

²BRIMS, bidar, Email - Shruti34556@gmail.com

Abstract

Background: Cataract is a common sequela of uveitis and may result from chronic intraocular inflammation as well as prolonged corticosteroid therapy. Cataract surgery in eyes with previous uveitis can be technically challenging because of posterior synechiae, small or irregular pupils, inflammatory membranes and compromised ocular tissues. Despite these challenges, appropriate control of inflammation and modern cataract surgery can result in significant visual rehabilitation.

Aim: To evaluate intraoperative and postoperative complications and assess visual outcomes following cataract surgery in patients with post-uveitic cataract.

Materials and Methods: A hospital-based observational study was conducted in the Department of Ophthalmology, MECC Hospital, Bidar, from June 2024 to December 2024. Thirty patients with post-uveitic cataract were included. All patients underwent detailed preoperative ophthalmic evaluation followed by cataract surgery with intraocular lens implantation where appropriate. Intraoperative complications, postoperative complications and best-corrected visual acuity were assessed during follow-up.

Results: Posterior synechiae requiring synechiolysis (40%) and small or poorly dilating pupils (33.3%) were the most frequent intraoperative challenges. Postoperative complications included persistent anterior chamber inflammation (20%), posterior capsule opacification (16.7%), raised intraocular pressure (13.3%), cystoid macular edema (10%), corneal edema (6.7%) and recurrent uveitis (6.7%). At final follow-up, 60% achieved BCVA of 6/6–6/18 compared with 6.7% preoperatively.

Conclusion: Cataract surgery in post-uveitic eyes can provide substantial visual improvement when inflammation is adequately controlled and appropriate perioperative management is undertaken. Careful preoperative assessment, meticulous surgical technique and close postoperative monitoring are essential.

Keywords: Post-uveitic cataract, uveitis, cataract surgery, phacoemulsification, intraoperative complications, postoperative complications, visual outcome.

Introduction

Uveitis is an inflammatory disorder involving the uveal tract and may be associated with significant structural and functional damage to the eye. Cataract is an important complication of uveitis and can develop as a consequence of chronic intraocular inflammation and prolonged corticosteroid therapy. Cataract extraction in an eye with previous uveitis is more challenging than routine age-related cataract surgery because posterior synechiae, inadequate pupillary dilatation, inflammatory membranes, zonular weakness and pre-existing macular or optic-nerve pathology can complicate surgery and limit postoperative visual recovery.

Postoperative inflammation is particularly important in uveitic eyes. Complications such as cystoid macular edema, persistent or recurrent uveitis, raised intraocular pressure, hypotony, posterior capsule opacification and epiretinal membrane may occur. Published reviews and cohort studies emphasize the importance of achieving a period of quiescent inflammation before surgery and using appropriate perioperative anti-inflammatory therapy. The present study was undertaken to evaluate the intraoperative and postoperative complications and visual outcome among patients undergoing cataract surgery for post-uveitic cataract at MECC Hospital, Bidar.

AIM

To study the intraoperative and postoperative complications and visual outcome in patients with post-uveitic cataract undergoing cataract surgery.

OBJECTIVES

- To identify the common intraoperative complications encountered during cataract surgery in post-uveitic eyes.
- To assess postoperative complications.
- To compare preoperative and postoperative visual acuity.
- To assess the proportion of patients achieving useful postoperative visual acuity.
- To identify factors associated with poor postoperative visual outcome.

MATERIALS AND METHODS

Study design: Hospital-based observational study.

Study period: June 2024 to December 2024.

Study setting: Ophthal Hospital, Bidar, Karnataka, India.

Study population: A total of 30 patients diagnosed with post-uveitic cataract were included.

Inclusion Criteria

- Patients diagnosed with cataract secondary to previous uveitis.
- Patients aged 18 years or older.
- Patients undergoing cataract surgery during the study period.
- Patients willing to participate and available for postoperative follow-up.

Exclusion Criteria

- Active uncontrolled uveitis at the time of surgery.
- Traumatic cataract.

- Congenital or developmental cataract.
- Previous intraocular surgery unrelated to uveitis.
- Severe corneal opacity preventing adequate assessment.
- Eyes with advanced retinal or optic nerve disease where visual outcome could not reasonably be attributed to cataract surgery.

Preoperative Evaluation

All patients underwent detailed history, assessment of previous inflammatory episodes and corticosteroid/immunosuppressive therapy, BCVA, slit-lamp examination, intraocular pressure measurement, gonioscopy where indicated, dilated fundus examination, assessment of posterior synechiae and pupillary status, and B-scan ultrasonography when the fundus was not visible. The macula and optic nerve were specifically assessed.

Perioperative Management and Follow-up

Uveitis was controlled before surgery whenever possible. Perioperative corticosteroid therapy was administered according to clinical status and treating ophthalmologist protocol. Patients were examined on day 1, 1 week, 1 month and 3 months. BCVA, anterior chamber reaction, intraocular pressure, corneal edema, wound-related complications, CME, PCO, recurrence of uveitis and IOL-related complications were recorded.

RESULTS

A total of 30 patients with post-uveitic cataract were included. The largest age group was 46–60 years (36.7%), followed by 31–45 years (26.7%). Seventeen patients (56.7%) were male and 13 (43.3%) were female.

Preoperatively, 2 patients (6.7%) had BCVA of 6/6–6/18, while 13 (43.3%) had BCVA <6/60–1/60 and 5 (16.7%) had BCVA <1/60.

Table 1. Age Distribution

Age group	Number	Percentage
18–30 years	4	13.3%
Age group	Number	Percentage
31–45 years	8	26.7%
46–60 years	11	36.7%
>60 years	7	23.3%
Total	30	100%

Table 2. Sex Distribution

Sex	Number	Percentage
Male	17	56.7%
Female	13	43.3%
Total	30	100%

Table 3. Preoperative Visual Acuity

Preoperative BCVA	Number	Percentage
6/6–6/18	2	6.7%
6/24–6/60	10	33.3%
<6/60–1/60	13	43.3%
<1/60	5	16.7%
Total	30	100%

Table 4. Common Intraoperative Complications

Finding/complication	Number	Percentage
Posterior synechiae requiring synechiolysis	12	40.0%
Small/poorly dilating pupil	10	33.3%
Iris manipulation/iris prolapse	4	13.3%
Posterior capsular rupture	2	6.7%
Zonular weakness/dialysis	2	6.7%

Table 5. Postoperative Complications

Complication	Number	Percentage
Persistent anterior uveitis/inflammation	6	20.0%
Raised intraocular pressure	4	13.3%
Cystoid macular edema	3	10.0%
Posterior capsule opacification	5	16.7%
Corneal edema	2	6.7%
Recurrent uveitis	2	6.7%
No significant complication	14	46.7%

Table 6. Visual Outcome After Cataract Surgery

Final BCVA	Number	Percentage
6/6–6/18	18	60.0%
6/24–6/60	7	23.3%
Final BCVA	Number	Percentage
<6/60–1/60	3	10.0%
<1/60	2	6.7%
Total	30	100%

Table 7. Comparison of Preoperative and Final Postoperative Visual Acuity

Visual outcome	Preoperative	Final postoperative
6/6–6/18	2 (6.7%)	18 (60.0%)
6/24–6/60	10 (33.3%)	7 (23.3%)
<6/60–1/60	13 (43.3%)	3 (10.0%)
<1/60	5 (16.7%)	2 (6.7%)

DISCUSSION

Post-uveitic cataract presents unique surgical challenges. In the present study, posterior synechiae and poor pupillary dilatation were the most frequent intraoperative challenges. These findings are consistent with published literature identifying synechiae and pupil abnormalities as common technical difficulties in uveitic cataract surgery. Posterior capsular rupture and zonular weakness were less frequent but clinically important complications.

Persistent postoperative inflammation was the most frequent postoperative complication in this series. Uveitic eyes remain at increased risk of postoperative inflammatory activity, CME and pressure elevation. Larger cohort studies have similarly reported substantial rates of postoperative uveitis flare and CME. Longer periods of preoperative quiescence and appropriate perioperative anti-inflammatory treatment are associated with better outcomes.

The present study demonstrated substantial improvement in visual acuity, with 60% of patients achieving 6/6–6/18 at final follow-up. This is broadly consistent with published observational studies and systematic reviews showing that cataract surgery can provide meaningful visual rehabilitation in appropriately selected eyes with controlled uveitis. Visual prognosis may nevertheless be limited by the underlying uveitic diagnosis, chronicity of inflammation, pre-existing CME and posterior-segment pathology.

CONCLUSION

Cataract surgery in post-uveitic eyes can result in substantial visual improvement when inflammation is adequately controlled and appropriate perioperative management is undertaken. Posterior synechiae, poor pupillary dilatation and postoperative inflammation remain important challenges. Careful preoperative assessment, meticulous surgical technique, appropriate anti-inflammatory therapy and close postoperative monitoring are essential to minimize complications and optimize visual outcomes

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