



A STUDY ON VISUAL PROGNOSIS IN LENS INDUCED GLAUCOMA AFTER MEDICAL & SURGICAL MANAGEMENT.

Ophthalmology

Dr. Rajashekar Dharmayat PG, M.S Ophthalmology, Department of Ophthalmology, Navodaya Medical College Hospital And Research Centre, Raichur 584103.

Dr. Nanda Pujari Senior Resident, M.S Ophthalmology, Department of Ophthalmology, Navodaya Medical College Hospital And Research Centre, Raichur 584103.

Dr. Shaik Abdul Aziz PG, M.S Ophthalmology, Department of Ophthalmology, Navodaya Medical College Hospital And Research Centre, Raichur 584103.

Dr. Sharanabasamma* Associate professor, Department of Ophthalmology, Navodaya Medical College Hospital And Research Centre, Raichur 584103. *Corresponding Author

ABSTRACT

OBJECTIVE: To assess the visual prognosis in lens induced glaucoma after medical & surgical management.

MATERIALS AND METHODS: This is a prospective study on patients with LIG attending OPD in department of Ophthalmology at Navodaya medical college hospital and Research centre & willing to participate this study.

RESULTS: In all the 100 cases of LIG included in the study, the lens was removed & depending upon the condition IOL was implanted. Majority of the patients were having IOP in the range 31-50mmHg (64%), post-operative IOP reduced to normal in most of the cases.

As the duration of attack increases the best corrected V/A decreases. In present study when duration of attack <10 days, 90% showed best corrected V/A better than 6/60 but in cases with longer than >10 days, 40% showed V/A better than 6/60.

CONCLUSION: Despite high IOP at the initial presentation in cases of LIG, IOP came down to normal limits after lens extraction. The results of LIG in response to visual recovery & IOP control are quite satisfactory & encouraging.

KEYWORDS

Cataract, Lens induced glaucoma, Manual small incision cataract surgery, Visual acuity.

INTRODUCTION

Cataract alone accounts for major cause (51%) of global blindness. Lens induced glaucoma is a distinct pathological entity, clinically recognizable, easily preventable & curable by cataract extraction.¹

Lens induced glaucoma due to hyper mature cataract is an important cause of secondary glaucoma & a common cause of ocular morbidity in the developing world.² Cataract in India is the most important cause of preventable blindness accounting to 63.7%. Manual small incision cataract surgery is popular in developing countries as it is inexpensive compared to phacoemulsification & allows high volume cataract surgery without compromising quality of medical care.³ Hence this study was done with the main aim that lens is the chief incriminating factor in the production of secondary glaucoma & removal of the causative factor i.e., the lens by surgical method relieves glaucoma.

AIM AND OBJECTIVE

To assess the visual prognosis in lens induced glaucoma after medical & surgical management.

INCLUSION CRITERIA:

- Patients diagnosed with all types of lens induced glaucoma
- Patients are selected irrespective of age & sex
- Patients are selected irrespective of onset & duration of symptoms

EXCLUSION CRITERIA:

- Patients already diagnosed with existing glaucoma or any other ocular disease
- Patients of glaucoma following trauma

MATERIAL AND METHODS

Patients with lens induced glaucoma (LIG) attending the OPD of department of ophthalmology, Navodaya Medical College Hospital and Research Centre, Raichur & willing to participate in this study were included in the study.

A detailed clinical history was taken, A thorough clinical examination was undertaken in the following manner

- Visual acuity – Vision was recorded in both the eyes and BCVA was given.
- Anterior segment evaluation with slit lamp – attention was paid to circumferential congestion, corneal transparency, lid oedema, keratic precipitates.

Ant chamber: depth, cells, flare, presence of lens particulate matter or

lens proteins.

Iris: colour, pattern, post. synechiae, atrophic patches, iridodonesis.

Pupil: size, whether fully dilated or mid dilated, shape & reaction to light

Lens: size, transparency, position, condition of anterior capsule of lens, degree of cataractous changes

- Tonometry: pressure recording was done with applanation tonometer
- Gonioscopy – done with Zeiss 4 mirror gonioscopic lens for assessing the condition of angle of anterior chamber in all cases
- Posterior segment evaluation – was difficult because of corneal edema & cataractous changes in the effected eye. Ophthalmoscopic evaluation of fellow eye was done to rule out pre-existing primary glaucoma
- The other eye was also examined in detail giving importance to state of lens, angle of ant. chamber, post segment examination & IOP
- Systemic evaluation including Blood Pressure & routine investigation were done.

OBSERVATIONS AND RESULTS

An analysis of the clinical study and management of 100 LIG cases of lens reveals the following facts, categorized under appropriate headings.

Table -i Iop At The Time Of Admission

IOP Range	No of cases	Percentage
20-30	18	18
31-40	39	39
41-50	25	25
>51	18	18
Total	100	100

Maximum no of cases had intraocular pressure between 31 to 40 mmHg i.e., 39%.

Table -ii Relationship Between Duration Of Symptoms And Postoperative Bvca

Duration of Attack	No of cases	BCVA		
		Better than 6/ 12	B/W 6/18 to 6/60	<6/60
< 5 days	40	28	12	-
6 to 10 days	50	5	42	3
11 to 15 days	7	-	3	4

>15 days	3	-	1	2
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When duration of attack was upto 10 days 87 (96.66%) out of 90 cases showed V/A 6/60 or better, when duration of attack was greater than 10 days only 4 (40%) cases out of 10 had V/A 6/60 better clearly indicating impact of duration of presentation on BCVA.

Table -iii Comparison Between Preoperative Iop And Postoperative Bvca

Preoperative IOP			Postoperative BCVA
20 - 40 mmHg	41 - 50 mmHg	>51 mmHg	
30	3	-	>6/12
27	20	11	6/18 — 6/60
-	2	7	<6/60

In the present study when IOP at initial presentation was below 40mmHg, all patients had a visual acuity better than 6/60. When IOP was between 41 - 50 mmHg, 23 (92%) patients out of 25 had BVCA better than 6/60 and patients with IOP more than 50mmHg only 11 (61.11%) out of 18 had BVCA better than 6/60.

Table-iv Vision After Surgery

BCVA	No of cases	Percentage
< 6/60	9	9
6/60 — 6/36	8	8
6/24 — 6/18	50	50
6/12 — 6/6	33	33
TOTAL	100	100

Most of the patients (91 %) had BCVA better than 6/60 after surgery.

DISCUSSION

Lens induced glaucoma is a common occurrence in India. This preventable and curable condition, though rare in developed countries for decades, is unfortunately still prevalent in our country.⁴ Even though awareness of cataract & its surgical treatment is ever increasing in our society, lens induced glaucoma continues to occur more often in India.⁵ In our study at six weeks BCVA better than 6/12 was achieved in 33 cases (33%), 6/18-6/60 in 58(58%) and < 6/60 in 9 cases (9%). In the present study BCVA > 6/60 was achieved in 91 cases (91 %) which is more or less similar to Prajan NV et al⁶ study that showed BCVA of >6/60 in 82cases (88%) and less than 6/60 in 5cases (10%). In the present study out of the total 9 patients who had poor visual recovery of <6/60, glaucomatous optic changes have been found in four eyes, cystoid changes in macula in two eyes, corneal decompensation in three eyes.

CONCLUSIONS

Early diagnosis and treatment of mature cataract is very important since delayed treatment of lens induced glaucoma may result in poor visual outcome. Despite high IOP at the initial presentation in cases of lens induced glaucoma, IOP came down to normal limits after lens extraction. The results of LIG in response to visual recovery and IOP control are quite satisfactory and encouraging. Early presentation and moderate increase in preoperative IOP and early treatment resulted in good visual outcome. Lack of need for better vision, concurrent systemic disease, old age and economic constraints are among other reasons for patients not receiving treatment.

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