

A Clinical Study to Evaluate the Role of Combined Trabeculectomy with Small Incision Cataract Surgery in Patients with Glaucoma and Coexisting Cataract from Rural Population

Tukaram Ranbaji Gitte^{1*}, Hanumant Tulsiram Karad², Pavan Panjabrao Chavan³,

Varsha Ramesh Dhakne⁴, Ashish Agrawal⁵

¹Associate Professor, ²Professor and HOD, ^{3,4,5}PG Students

Dept of Ophthalmology, MIMSR Medical College, Vishwanathpuram, Ambajogai road, Latur, Maharashtra, INDIA.

*Corresponding Address:

trgitte03@gmail.com

Research Article

Abstract: Objectives: To evaluate the role of surgical combined Trabeculectomy with small incision cataract surgery in reducing IOP in patients suffering from Glaucoma with coexisting cataract. **Methods:** A Retrospective data analysis was carried out, comprising of 49 patients suffering from glaucoma with coexisting cataract who underwent trabeculectomy with small incision cataract surgery at Tertiary Eye Healthcare Centre over two years from January 2012 to December 2013. Pre-operative & post-operative IOP was measured. **Results:** The success rate is 100% in lowering IOP below 21 mm Hg. **Conclusion:** This study shows that trabeculectomy with small incision cataract surgery has been effective in controlling the pressures below the desired levels.

Keywords: trabeculectomy, small incision cataract surgery, intra-ocular pressure (IOP)

Introduction

It is common to find glaucoma to coexist with cataract; this is related to age. Glaucoma is the leading cause of irreversible blindness in the world and constitutes one of the greatest problems in ophthalmologic care worldwide.¹ In the present study the effect of trabeculectomy & small incision cataract surgery (SICS) on IOP is studied. Trabeculectomy is a surgical procedure, which is a simple, economical and versatile technique. An added advantage of trabeculectomy is that it can be combined effectively with cataract surgery and IOL implantation as glaucoma and cataract co-exists in a large number of cases.² The success of Trabeculectomy mainly depends on the accuracy of the preoperative diagnosis, operative technique and postoperative competence.

Material and Methods

Inclusion criteria

1. All patients of glaucoma with coexisting cataract.
2. IOP >21 mm Hg.

Exclusion Criteria

1. Patients who have undergone prior ocular surgery.

2. Patients who have undergone argon laser trabeculoplasty.

3. Plain cases of primary open angle & angle closure glaucoma.

Our study comprised of 49 patients suffering from glaucoma with coexisting cataract who underwent trabeculectomy with small incision cataract surgery at this tertiary eye healthcare centre over two years from January 2012 to December 2013.

Gonioscopy & Schiotz tonometry was done on all 49 cases. Routine standard pre-operative assessment was done. Standard steps of trabeculectomy & SICS were followed.

Acetazolamide 250mg orally 2 times a day, topical timolol eye drops OD and use of additional hyperosmotic agent such as 50% oral glycerol as required. All cases received 1.5gm/kg body weight of 20% mannitol IV 1-2 hours prior to surgery. Informed consent was taken in all cases before performing surgery. Post-operative all received local antibiotics, cycloplegic eye drops and steroidal anti-inflammatory eye drops. Steroid drops were tapered over 40 days. IOP was determined on day 7 & day 40. A success was defined as an IOP < 21mm Hg without medication and failure as an IOP >21mm Hg.

Observation

Table 1: Age distribution of cases.

Sr.No.	Age Group in years	No.of Cases
1	11 -- 20	0
2	21 -- 30	0
3	31 -- 40	0
4	41 -- 50	33
5	51 -- 60	6
6	61 -- 70	8
7	71 -- 80	2

Table 2: Mean IOP, pre-operative and post-operative.

Period	Mean IOP mmHg	Percentage of Reduction
Pre OP	40.33±6.95 mm Hg	--
Post OP D7	14.714±6.95 mm Hg	36.47%
Post OP D40	14.714±6.95 mm Hg	36.47%

Table 3: Filtering bleb, characteristics.

Sr. No.	Types of Bleb	No. Of Cases	Percentage
1	Diffuse	9	18.37
2	Cystic	22	44.90
3	Flat	13	26.53
4	Encapsulated	5	10.20

Data of total 49 cases managed over two years was analysed. Cases belonged to age group 42 to 75 years, with mean age as 49.72±11.98 years (Table-1). Male female distribution was almost similar, 47% were female and 53% were male. The mean IOP preoperative was 40.33±6.95 mm Hg. The mean IOP on day 7 post-operative was 14.71±6.95 mm Hg and on day 40 post-operative it was 14.714±6.95 mm Hg. This was determined at follow-up visits. The percentage reduction in IOP in this study was 63.57% (Table-2). Table-3 shows the type of filtering bleb formed in these cases.

Discussion

Glaucoma is the leading cause of irreversible blindness in the world and constitutes one of the greatest problems in

ophthalmologic care worldwide.⁵ Most of the patients with glaucoma has coexisting cataract as both disease share a common age group. Trabeculectomy is a surgical procedure that reduces intraocular pressure to a level that curtails or significantly slows the process of optic nerve excavation and subsequent field loss. The mode of action of trabeculectomy is predominantly by external filtration as majority of successful cases have a visible bleb. In order to assess the role of surgical trabeculectomy in reducing IOP in patients suffering from glaucoma with coexisting cataract we retrospectively analysed data of 49 such cases. All 49 cases showed reduction in IOP and formation of filtering bleb as assessed on day7 and day40.

Conclusion

Combining trabeculectomy with SICS successfully reduces IOP to normal.

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