

# Experience with Childhood Cataract

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## Abstract

This study shows management profile of 71 eyes of 52 children below the age of 10 years having congenital/developmental cataract. They were operated upon for cataract with intraocular lens implantation after establishing their possible aetiology. However, aetiology of cataract could be established only in 46.15% cases. Vitreous thrust (8.45%), iritis (15.49%) and posterior capsular opacification (25.35%) were the most common per-operative, immediate post-operative and late post-operative problems encountered respectively. After one year of follow up 52.11% eyes regained visual acuity better than 6/24 after full correction and amblyopia therapy.

## Key words

Childhood cataract, Intraocular lens, Amblyopia

## Introduction

Cataract in childhood is a leading cause of visual impairment and blindness. Deprivation of vision in early years of life can adversely affect overall development of child with far reaching effects on personal, educational, occupational and social aspects (1). Therefore early detection and treatment is very crucial for maximizing visual development and preventing amblyopia (2). Management of congenital/developmental cataract poses a challenge to ophthalmic fraternity, patients and parents in terms of management, visual development and visual rehabilitation of these patients (3).

We endeavor to present the management profile of 71 eyes of 52 patients having childhood cataract who underwent irrigation and aspiration with intraocular lens implantation in upgraded department of Ophthalmology Govt. Medical College, Jammu during January 2000 to July 2001.

## Material and Methods

All patients included in this study were less than 10 years of age. After detailed history and relevant investigations to establish possible aetiology, ophthalmic checkup including visual acuity, slit lamp examination, fundus examination, retinoscopy, keratometry, B-scan ultrasonography and IOL Power calculation wherever possible were done. IOL power was calculated by using SRK II formula. In all patients under correction was done by 10%. Dilatation of pupil was done by using cyclopentolate 1% and phenylephrine 10% at 90, 60, 30 and 15 minutes preoperatively. In all cases irrigation and aspiration was done with wide anterior capsulotomy. Primary posterior capsulotomy was done in all cases. In children with bilateral lens opacities requiring surgery, eye with poorer vision was operated first and surgery for second eye was done three months later. All cases remained on topical steroids and mydriatic for six weeks

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post-operatively. Children where we were not able to implant IOL were not included in this study. Children with unilateral cataract were given occlusion therapy for amblyopia post operatively as per Write LW Kolin protocol (4).

All patients were reviewed at 1, 2, 3, 4 and 6 weeks interval and there after every three months for 1 year.

### Results

**Table 1**

**Total No. of Children of Childhood cataract**

Total No. of Children	52
Unilateral cases	33
Bilateral cases	19
Total No. of eyes	71

**Table 2**

**Age wise distribution of cases**

Age in years	No. of Patients	No. of Eyes
0-2	1	2
2-4	5	9
4-6	17	22
6-8	12	18
8-10	17	20

**Table 3**

**Aetiologi al analysis of childhood cataract**

S.No.	Causes	Eyes	Percentage
1.	Idiopathic	28	53.85
2.	PRENATAL Antibiotics Abortificant Corticosteroids Antipsychotics	1 2 1 1	9.61
3.	POSTNATAL Prematurity Birth trauma PUO	2 3 2	13.47
4.	TORCH +VE Rubella Toxoplasmosis	2 3	9.61
5.	Hereditary	4	7.69
6.	Metabolic	3	5.77

**Table 4**

**Complications in childhood cataract**

Complication	Eyes	Percentage
OPERATIVE		
Vitreous thrust	6	8.45
Hyphaema	1	1.04
POST OPERATIVE		
Striate keratitis	9	12.67
Shallow anterior chamber	3	4.2
Hyphaema	2	2.80
Glaucoma	9	12.67
Iridocyclitis	11	15.49
Retained lens matter	6	8.45
Pupillary capture	8	11.26
LATE COMPLICATIONS		
Sec. Glaucoma	2	2.80
PCO	18	25.35

**Table 5**

**Visual outcome in childhood cataract**

Vision	Eyes	Percentage
>6/60	9	12.68
6/60	7	9.86
6/36	11	15.49
6/24	31	43.66
6/18	5	7.04
6/12	1	1.41
6/9	Nil	0
6/6	Nil	0
Not able to record	8	11.27

### Discussion

Proper antenatal and natal history is important to find out aetiology of childhood cataract. However we could not establish cause of cataract in about 53.85% cases. Age at which cataract is operated is very important. 38.03% of eyes could not get visual acuity better than 6/36. This might be because of delay in cataract surgery, thus development of amblyopia and because of other surgically related problems. In literature there is

controversy regarding time interval between surgical interventions between two eyes (5). Our experience shows that second eye should be operated six weeks later because it has been seen that rate of complications is higher if operated earlier and more over we can manage second eye better by seeing postoperative behaviour of first. Age at which IOL should be implanted is again controversial (6). Ideally it should be implanted after the age of one and half years and IOL should be heparin surface PAMMA IOL among rigid lenses and acrylic hydrophobic among foldables.

Positive vitreous pressure was most common (8.45%) operative problem encountered by us in first six eyes, which later on was overcome by giving I/V mannitol in preoperative period. Initially postoperative glaucoma was also seen in 9 eyes where no peripheral iridectomy was done but all cases responded to antiglaucoma medication except two and when PI was done as a routine this complication also didnot occur in rest of cases. So preoperative I/V mannitol and peripheral iridectomy should be a routine in childhood cataract surgery (7). Pupillary capture occurs more in those children, where atropine is used. Since low scleral rigidity and hyperactivity of children can also cause this problem (8), this could be reason for pupillary rapture (11.26%) in our cases. Long-term follow up is very important especially for detection and management of complications like PCO which can again cause sensory obstacle. We must therefore not become complacent and should remain vigilant about potential long-term

complications (9-10). The visual acuity was the most difficult to assess in infants and pre-school children due to their age. Rough estimates of the vision was made by using balls of different sizes and colours, toys of different sizes and hand charts in addition to snellen line charts and single letter charts. In spite of this we were not able to record visual acuity in children (11.27%). We suggest long term high volume longitudinal studies to establish the safety of IOL's in young children and infants and to determine what is the best treatment in this age group.

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