



STUDY OF OCULAR MORBIDITY IN UNDER FIVE CHILDREN AT A TERTIARY CARE HOSPITAL IN MAHARASHTRA

Dr. Anjali Gokhale EX-Senior Resident, Sanjay Gandhi Hospital, Delhi

Dr. Sujata Chahande* Professor and Head, Government Medical College, Alibag*Corresponding Author

(ABSTRACT) **BACKGROUND:** Children are the future of our country. In order to have good future they need to have good eye sight and healthy vision as this affects their learning abilities. Study on prevalence and etiology of ocular morbidity in children is essential for planning and evaluation of preventive and curative measures for children in a given age group.

AIMS AND OBJECTIVES

1. To study ocular morbidity in under five children visiting tertiary care institute.
2. To study the etiology of ocular morbidity in under five children visiting tertiary care institute.

METHODS: A cross sectional and descriptive study done on 500 under five children visiting B.J. Medical college, Pune. **RESULTS:** 1000 children aged under five screened. Congenital eye disease was most common ocular morbidity (37.6%), ocular trauma (24.7%), infection of eye and adnexa (11.5%) allergic conjunctivitis (10.9%), refractive error (10.3%), corneal opacity (2%), others (3%). **SUMMARY:** The childhood ocular disorders are very difficult to diagnose and manage as they cannot speak about their problems due to less developmental age and are not cooperative for examination. The four important causes of ocular morbidity in our study were found to be Congenital eye diseases being the highest, followed by Ocular trauma, Infections of eye and adnexa and Allergic conjunctivitis. Maximum presentation was seen in the age group <1 year. Thereby, stressing the importance of regular Antenatal care and post-natal care and evaluation of the mother and child. Early screening and evaluation of the baby would help in identifying the cause, and timely intervention would therefore help in decreasing the burden of ocular morbidity in this age group. **CONCLUSION:** This study helps us in planning and prevention of ocular morbidity in under five children majority of which are either treatable or preventable if diagnosed at the earliest.

KEYWORDS : Ocular morbidity, Under five aged children, Preventable blindness.

INTRODUCTION:

Children are the future of our country. In order to have good future they need to have good eye sight and healthy vision as this affects their learning abilities. Study on prevalence and etiology of ocular morbidity in children is essential for planning and evaluation of preventive and curative measures for children in a given age group.

Childhood eye morbidity is defined as "Any eye disease or condition that requires ophthalmic care and treatment which if untreated can often progress to serious and sight threatening disease[1]". Diseases included can be divided into congenital eye disease, infections involving eye and adnexa, ocular trauma, refractive error, corneal opacity, ocular tumors, glaucoma, allergic conjunctivitis.

The rate of infection and complications are influenced by a number of socio-economic and sociocultural factors and season[2].

AIMS AND OBJECTIVES

1. To study ocular morbidity in under five children visiting tertiary care institute.
2. To study the etiology of ocular morbidity in under five children visiting tertiary care institute.

MATERIALS AND METHODS

1) STUDY DESIGN:

The study "Study of ocular morbidity in children aged under five" was conducted in B.J. Medical College and Sassoon hospital, Pune, Maharashtra.

This was a cross sectional study to assess the ocular morbidity in children aged under five years conducted in the Department of Ophthalmology of the institute from March 2014 TO October 2015.

2) Study Population:

1. Sample size: Total sample size was 1000
2. Patient eligibility:

Inclusion criteria:

1. All children diagnosed with ocular morbidity under five years of age.

Exclusion criteria:

1. Patients diagnosed with ocular morbidity above five years of age.
2. Patients with learning disability.

3) Assessment of patient:

1. History taking:

Detailed history taken from patient and guardian or attendant (If necessary).

2. Clinical Evaluation:

Thorough ocular examination was done in all patients.

Ocular disorders were divided on anatomical basis and refractive system.

- The patients were stratified into age groups <1yr, 1-2yrs, 2-3yrs, 3-4yrs, >4yrs-5yrs.



OBSERVATION AND RESULTS

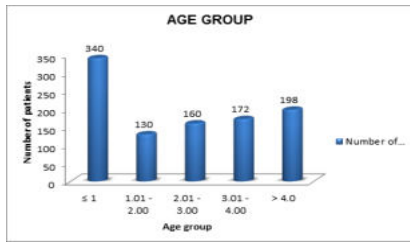
TABLE 1: AGE WISE DISTRIBUTION

Age group	Number of patients	Percentage (%)
≤ 1	340	34.0
1.01 - 2.00	130	13.0
2.01 - 3.00	160	16.0
3.01 - 4.00	172	17.2
> 4.01 - 5.00	198	19.8
Total	1000	100.0

TABLE 2: GENDER WISE DISTRIBUTION

Gender	Number of patients	Percentage (%)
Male	584	58.4
Female	416	41.6
Total	1000	100.0

GRAPH 1: AGE WISE DISTRIBUTION



GRAPH 2: GENDER DISTRIBUTION

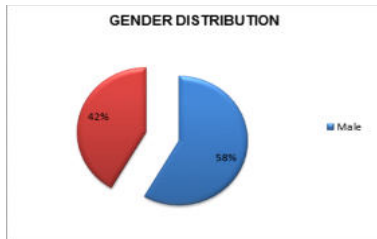


TABLE 3: AFFECTED EYE

Affected eye	Number of patients	Percentage (%)
OD	298	29.8
OS	331	33.1
OU	371	37.1
Total	1000	100.0

GRAPH 3: AFFECTED EYE

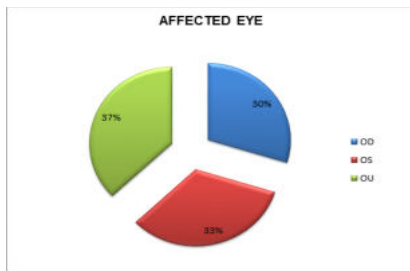


TABLE 4: ETIOLOGY OF OCULAR MORBIDITY

	Number of patients	Percentage (%)
Refractive error	103	10.3
Infection of eye and Adnexa	115	11.5
Congenital eye diseases	376	37.6
Ocular trauma	247	24.7
Allergic conjunctivitis	109	10.9
Corneal opacity	20	2
Others	30	3

GRAPH 4: ETIOLOGY OF OCULAR MORBIDITY

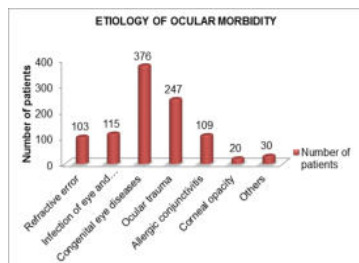


TABLE 5: MODALITY OF TREATMENT

Treatment	Number of patients	Percent
Conservative	554	55.4
Lenectomy	171	17.1
Refraction done	103	10.3
Tear repair	75	7.5

Foreign body removal	29	2.9
Lid repair	19	1.9
Lid reconstruction	16	1.6
Chemotherapy	12	1.2
Globe repair	9	0.9
Incision & curettage	6	0.6
Sling surgery	5	0.5
Canalicular repair	1	0.1
Total	1000	100.0

GRAPH 5: MODALITY OF TREATMENT

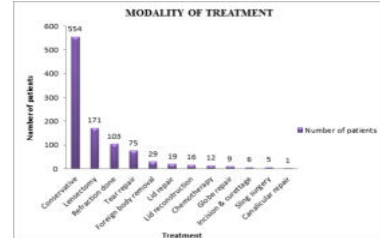
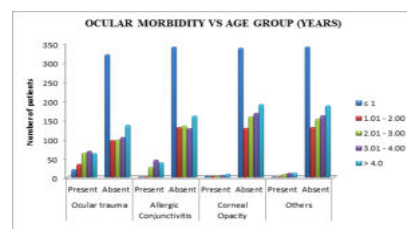
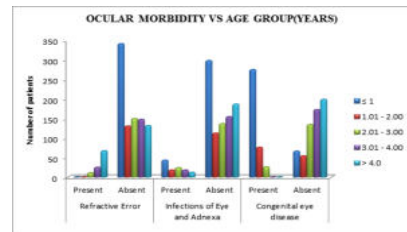


TABLE 6: ASSOCIATION OF AGE GROUP WITH ETIOLOGY OF OCULAR MORBIDITY

		Age group					Total	P-value
		≤ 1	1.01 - 2.00	2.01 - 3.00	3.01 - 4.00	> 4.0		
Refractive Error	Present	0	0	11	25	67	103	< 0.001
	Absent	340	130	149	147	131	897	
Infections of Eye and Adnexa	Present	43	18	24	18	12	115	0.044
	Absent	297	112	136	154	186	885	
Congenital eye disease	Present	274	76	26	0	0	376	< 0.001
	Absent	66	54	134	172	198	624	
Ocular trauma	Present	20	34	63	68	62	247	< 0.001
	Absent	320	96	97	104	136	753	
Allergic Conjunctivitis	Present	0	0	26	45	38	109	< 0.001
	Absent	340	130	134	127	160	891	
Corneal Opacity	Present	3	2	2	5	8	20	0.108
	Absent	337	128	158	167	190	980	
Others	Present	0	0	8	11	11	30	< 0.001
	Absent	340	130	152	161	187	970	

Conclusion: By using Fishers exact test p-value < 0.05 therefore there is significant association between occurrence of Ocular morbidity like Refractive error Infections of Eye and Adnexa, Congenital eye disease. Ocular trauma, Allergic Conjunctivitis and Others with Age group (years).

GRAPH 6: OCULAR MORBIDITY VS AGE GROUP (YEARS)



DISCUSSION:

The present study was conducted to know the pediatric ocular disorder as its data regarding Western Maharashtra is lacking. Multiple ocular diseases were diagnosed by consideration of isolated diagnostic criteria. There were total number of 1000 children aged under five screened which included 584 males and 416 females. Amongst the 1000 children Congenital eye disease was most common ocular morbidity (37.6%), ocular trauma (24.7%), infection of eye and adnexa (11.5%) allergic conjunctivitis (10.9%), refractive error (10.3%), corneal opacity (2%), others(3%).

As per study by Mehari et al[3] carried out on children aged 3 months to 15 years conjunctivitis was most common ocular disorder.

In a study by Biswas et al[4] among 714 children aged between 0-14 years refractive error was found to be 23.67%.

The number of children with right eye (OD) affected were 298(29.8%), left eye(OS) were 331 (33.1%) and bilateral eye involvement were 371(37.1%).669 cases were managed conservatively by giving medication and refraction. Rest of the cases were managed by surgical intervention.

CONCLUSION:

It is a difficult task to detect and treat children with ocular morbidity because they are unable to articulate their problems and are not cooperative for examination and treatment. However, it is important to approach children with the same pattern with which one would approach an adult. The most common causes of childhood ocular morbidity in this study were Congenital eye diseases, ocular trauma, infection of eye and adnexa and allergic conjunctivitis. Data on the pattern of presentation of childhood eye diseases serve as useful template for identifying, planning ophthalmic care strategies of children in under five age group in a given region because majority of these are treatable if diagnosed and managed at the earliest.

REFERENCES:

- 1) VISION 2020: The Right to Sight-How Does Vision 2020 Work?
- 2) SethiSonam, Kathra GP. Prevalence of refractive error in school children of Ahmadabad city. Indian journal of community medicine 2000; 25(4):181-183.
- 3) Mehari: Pattern of childhood ocular morbidity in rural eye hospital, Central Ethiopia. BMC Ophthalmology 2014 14:50
- 4) Biswas J,Saha I, Das D,Bandyopadhyay S,Ray B,Biswas G.Ocular morbidity among children at a tertiary eye care hospital in kolkata, West Bengal.Indian J Public Health 2012;56 293-6.