



Ocular Problems in School Children

KEYWORDS

childhood blindness , school health programme.

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ABSTRACT The study included a total number of 6640 children between 6-14 years age group belonging to Govt. Schools in Kurnool town.

A total of 1030 children were detected as having ocular disorders accounted for 15.51% Refractive errors were found in 496(7%) children, Vitamin A deficiency in 296 (4.45%) children, infections and inflammations in 102(1.53%), Squint in 62(0.9%) children, Amblyopia in 30 (0.4%) children congenital and developmental disorders in 20(0.3%) children other problems in 20(0.36%) children .The results are presented ,analyzed and discussed.

Introduction:

Visual impairment is a world wide problem that has a significant socioeconomic impact .Childhood blindness is a priority area because of number of years of blindness that ensues . Globally there are about 1.4 million blind children. 5,00,000 children are becoming blind every year .one every minute. Approximately 40% of the childhood blindness is preventable .Data on prevalence of causes of blindness of severe visual impairment in children are useful for planning and evaluating preventive and curative services for children ,including planning special education and low vision services.

School health services are an economical and powerful means of rising community health and more important for future generations. With this aim this study of ocular problems in school children was conducted.

Materials and Methods

Most of the children included in this study are between 6-14years.

For this study adequate room with good ventilation was selected for Anterior segment examination .The vision screening was done with the help of Snellen,s charts. After visual acuity testing Anterior segment examination was done for every child and Direct ophthalmoscopic examination of fundus for the necessary children. Hirschberg test, cover test and other tests were performed as required. Children with Vitamin A deficiency were identified and therapeutic dose of 2 lakhs IU Vitamin A was given orally. Children diagnosed as having infections were given antibiotic therapy.

The rest of the children with ocular problems were referred to Regional eye hospital and subjected to further examination like Slit lamp biomicroscopy and Retinoscopy under cycloplegia, and those requiring spectacles were given prescription

The children with Squint were referred to Squint clinic and further assessment was done by Worth Four Dot Test, Maddox Rod Test and Maddox Wing test , and Synoptophore is used to estimate the grades of binocular vision. Children with developmental cataract were operated under General anaesthesia.

Children having Retinal detachment and other lesions which cannot be managed in our hospital were referred to higher centres with all relevant documents.

RESULTS

A total number of 6640 children between 6- 14 years age group were included in this study. Among them 1030 children were detected as having ocular disorders which amounts to 15.51%

The following results were observed from our study.

Refractive errors are the commonest ocular disorders observed in 496 children accounting for 48.15% of total ocular disorders followed by Vitamin A deficiency in 296 children(28.73%) , infections and inflammations in 102 children (9.9%) ,strabismus in 62 children (6.01%), Amblyopia in 30 children (2.91%), Developmental anomalies in 20 children (1.94%), others (corneal opacity, traumatic cataract etc)in 24 children (2.33%).

Table;1

	Boys	Girls	Total
Number of children examined	3708	2932	6640
Number of children with ocular problems	552	478	1030
Percentage of children with ocular problems	14.88	16.3	15.51

Table;2

Total	Refractive Errors	Vitamin A deficiency	Infections and Inflammations	Squint	Amblyopia	Developmental Anomalies	Others	Total
Male	276	146	54	36	16	12	12	552
Female	220	150	48	26	14	8	12	478
Total	496	296	102	62	30	20	24	1030
Percentage	7%	4%	1	0.9	0.4	0.3	0.36	15.51

Table:3

Ocular disorder	Number of children affected	%of total disorder	%of total children
Refractive errors	496	48.15	7.46
Vitamin A deficiency	296	28.73	4.45
Infections and inflammations	102	9.9	1.53
Strabismus	62	6.01	0.93
Amblyopia	30	2.91	0.45
Developmental anomalies	20	1.94	0.3
Others	24	2.33	0.36
TOTAL	1030	100	

DISCUSSION

The current work conducted at Kurnool confirms the high prevalence of ocular morbidity among the school children.

The prevalence of ocular morbidity of 15.51% among school children of age 6-14 years in this study is lower to a study conducted in Delhi, where prevalence was reported to be 34.04% in the 5-14 years age group.

Our study was similar to the studies conducted in Kolkata, West India where prevalence of ocular morbidity was 15%. In our study refractive errors accounted for 7% of ocular morbidity.

Vitamin A deficiency up to an extent of 5 to 9% in 4-16 years age group had been reported from Rajasthan and Kolkata as compared to 4% in the present study.

The prevalence of squint in our study was 0.9%. Minimal difference in the prevalence of ocular disorders among males and females in the present study is comparable to results of the study by Sehgal et.al.in Delhi.(males 46.1% and females 48.3%)

The results of this study strongly suggests that screening children for ocular problems should be done at regular intervals and it should be one of the prime components of the school health programme. For this school teachers should be oriented and trained in identifying common eye problems among school children. So that these children can be referred for prompt treatment. In this manner the incidence of preventable causes of blindness among school children can be minimized.

SUMMARY

The study highlighted the prevalence of ocular problems in school children. An eye checkup at the time of school joining should be encouraged .Regular health check-ups helps to achieve reduction of childhood blindness to 0.4/1000 children which is a target of 2020 .Parents and teachers need to be made aware of its significance and should be involved as equal partners in the programme to ensure its success. Screening the school children for vision is useful for detecting correctable causes of decreased vision especially refractive errors .Vitamin A supplementation should be given for children with Vitamin A deficiency. Early detection and treatment of cataract due to congenital causes and trauma helps in reducing the school dropouts.

Current work highlights urgent need to implement appropriate eye care programmes targeting school children to reduce the burden of visual impairment among young population.

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