



STUDY OF INCIDENCE OF SQUINT IN SCHOOL GOING CHILDREN UNDER SCHOOL HEALTH PROGRAMME

Ophthalmology

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ABSTRACT

OBJECTIVES : To determine different types of squint.

MATERIALS AND METHOD: This is a prospective hospital based observational study carried on 1000 school going children, selected by non probability convenient sampling .The clinical profile is evaluated in Department of Ophthalmology and underwent detail assessment during December 2015 to January 2016 and December 2016 to January 2017. All children underwent assessment with emphasis and evaluation of the associated strabismus.

RESULT AND ANALYSIS: Prevalence of strabismus was 2.4% in the study population. Mean age of presentation in school going children was 9-11 years. Heterophoria was 66.66% in study population and heterotropia was 29.16% in children.

CONCLUSION: The prevalence of strabismus is low. Screening of children for squint should be done and it should be the prime component of the School Health Programme

KEYWORDS

Squint, School health programme.

INTRODUCTION:

Strabismus, often called "crossed-eyes" or "wall eyes," is a condition in which the eyes are not properly aligned with each other. One eye is either constantly or intermittently turned in (esotropia) or out (exotropia). This ocular misalignment may be accompanied by abnormal motility of one or both eyes, double vision, decreased vision, ocular discomfort, headaches, or abnormal head posture. Children in the school-going age group (6-16 years) represent 25% of the population in the developing countries. Ocular misalignments are common in newborns: one study found the prevalence of these around 73%. Pathological misalignment affects about 5% of 5-years old. Esotropias appear to be more common than exotropias. Intermittent exotropias are more common than constant exotropias, which tend to be associated with other abnormalities. Approximately 30% of patients with squint have a relative who is or was affected, and most families are concordant for the type of squint. Early identification and treatment of strabismic children may prevent amblyopia. The strabismic child with amblyopia has a significantly higher risk of becoming blind by losing vision in the non-amblyopic eye, due to trauma or disease. Normal binocular vision is required for many occupational and a vocational tasks, as well as many other activities in daily life. Therefore, prompt diagnosis and treatment of strabismus are critical. Symptoms such as diplopia, headaches, blurred vision, and ocular fatigue may cause individuals with intermittent strabismus who have the potential for normal binocular vision and older persons who are developing strabismus to alter their activities of daily living. A student with intermittent strabismus may avoid reading, resulting in poor academic achievement. Strabismus may also be cosmetically displeasing and have a significant psychological impact manifested as low self-esteem, especially in patients whose jobs involves substantial personal eye contact. Strabismus may also have an adverse effect on family relationships. In addition, delayed development (e.g., reaching milestones such as first walking and using single words) and difficulty with tasks involving visual perception have been found in young children with strabismus. Nevertheless, because problems encountered in screening young children for refractive errors and strabismus may result in under detection of vision problems, any child suspected of having strabismus should undergo a professional eye examination. Remediation of strabismus requires treatment and management by an eye care practitioner, and the results are usually best when instituted early. Preservation of vision and binocular function result from proper diagnosis, treatment and management, and patient compliance. Periodic re-evaluation is important for appropriate patient.

AIMS AND OBJECTIVES:

AIM: To determine the Incidence of squint cases in school going children (6-18yrs) under school health programme.

OBJECTIVES: 1. To assess the Incidence of squint cases in school going children (6-18yrs) under school health programme. 2. To

determine different types of squint cases in school going children. 3. Early detection and management of squint.

MATERIALS AND METHODS:

This is a prospective hospital based observational study carried on 1000 school going children of age group from 6 to 18 years, selected by non probability convenient sampling .The clinical profile of this children is evaluated in Department of Ophthalmology and underwent detail assessment during period of December 2015 to January 2016 and December 2016 to January 2017 under the school health programme.

All children underwent assessment for visual acuity, refractive status, the grade of binocularity, anterior segment examination with emphasis and evaluation of the associated strabismus, posterior segment examination.

INCLUSION CRITERIA

School going children (6-18yrs) under school health programme.

EXCLUSION CRITERIA

- Age <6yrs and >18yrs.
- Children who have already undergone treatment for squint.
- Children who cannot undergo evaluation for squint due to any systemic disorder.
- Other co-morbid conditions like epicanthal folds, wide nasal bridge, ptosis etc.
- Convergence insufficiency.
- Paralytic cases.

All the patients attending out-patient department at department of Ophthalmology, under school health programme, were being evaluated.

All patients underwent basic ophthalmological examinations, starting from

- Detailed ocular history
- Birth history
- Family history
- Past history
- Previous treatment taken or not
- Visual acuity
- Fixation Pattern
- Anterior segment examination by slit-lamp.
- Posterior segment examination with direct ophthalmoscopy and also with indirect ophthalmoscopy.
- Head posture
- Cover-uncover test
- Point of convergence
- Point of accommodation
- Prism bar cover test

- Ocular motility
- Detailed binocular vision tests using Maddox rods, Maddox wings, Synoptophore.

RESULT AND ANALYSIS:

Table no 1 show that most common age of presentation is in between 9 to 11 years of age.

Age(in years)	Number of patients
6-8	01
9-11	14
12-14	05
15-18	04

Figure 1 shows Depending upon the type of refractive error 15 patients (62.5%) have hypermetropia, 7 patients (29.16%) have no refractive error and 02 patients (8.33%) have myopia.

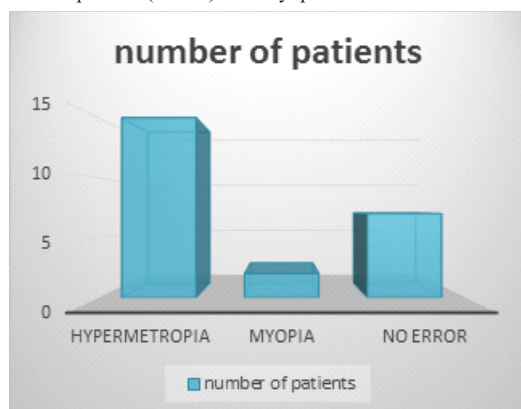
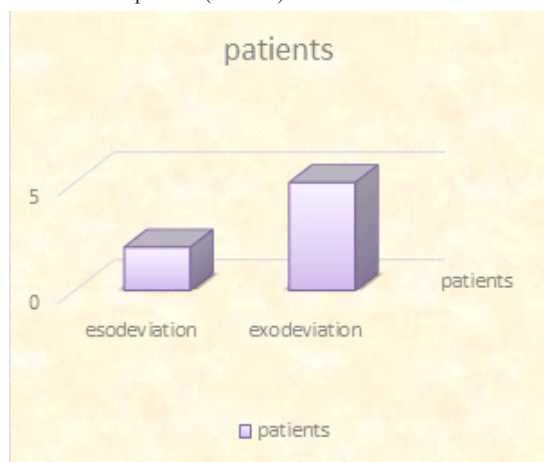


Figure 2 shows out of 7 patients, 5 patients (71.42%) showed exodeviation and 2 patients (28.57%) showed esodeviation.



DISCUSSION AND INTERPRETATION:

Various Studies similar to this study has been analysed.

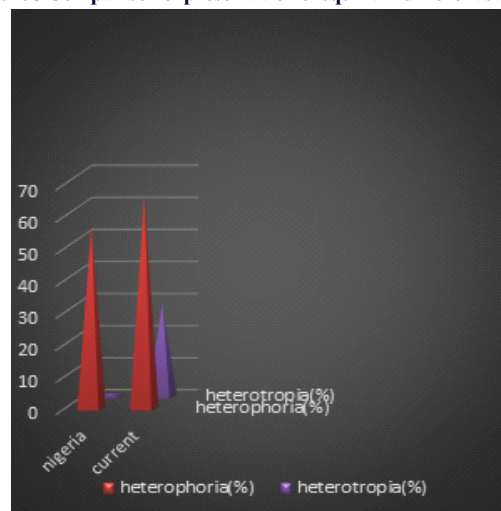
Table no 2 shows Comparison of incidence of squint in different studies:

Study At	Incidence (in %)
Maharashtra	1.55
Iran	1.68
Iraq	2
Southern Brazil	3.5
Natal, Brazil	2.9
Current Study	2.4

Incidence of Squint among School Going Children (6-15 years) in Padmashree Dr.Vithalrao Vikhe Patil Medical College & Hospital, Ahmednagar, Maharashtra, India was done, a total of 113 children were studied and incidence of squint was 1.55%. The incidence of Strabismus in 7-Year-Old Schoolchildren in Iran multistage randomized cluster sampling was used to select participants from among grade 1 students in the primary schools of 7 cities of Iran. Of 4157 selected students, 3675 participated in the study. The

incidence of strabismus was 1.68%. Incidence of strabismus among students in Natal/RN – Brazil. Total 1024 students were randomly selected and submitted to a questionnaire and a complete Ophthalmologic examination Of 1024 students, 1015 were examined; 29 were found to have strabismus i.e 2.9%. Strabismus in schoolchildren, Brazil. This was a cross-sectional study of all children attending the first to eighth grades at two public schools in the urban region of a medium-sized town in Southern Brazil between April and December 2012 in a total sample of 964 children incidence of strabismus was found in 3.5%. Current study carried as prospective observational study on 1000 school going children under school health programme incidence of squint was seen 2.4%.

Figure 3 Comparison of presentation of squint in different studies.



Prevalence and pattern of strabismus in primary school pupils in Benin city, Nigeria. This was a cross-sectional study carried out on primary school pupils in government school located within Egor Local Government Council Area, Edo State. Two thousand one hundred and thirty-nine students (2139) were examined. The overall prevalence of tropias in this study was 0.89% and 57.04% of the pupils had heterophoria. Current study carried as prospective observational study in on 1000 school going children under school health programme showed heterophoria in 16 children i.e 66.66% and tropia was found in 7 children i.e 29.16%.

CONCLUSION:

School health programmes should focus on the ocular health of children. Health education activities should be intensified in schools and also in the community. Screening of school children for squint 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.

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