

Amblyopia in Children with Strabismus

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Abstract: ***Aim:** To evaluate the prevalence of amblyopia in school children aged 5 - 15 years during October 2020 - September 2021. **Materials and methods:** 70 children aged 5 - 15 years were enrolled in the study. All cases were thoroughly evaluated, and appropriate management is advised. **Results:** 20 (14%) students were found to have amblyopia and 14 (2.8%) had defective vision, 6 (1.2%) exclusively had squint. Anisometropic and strabismic amblyopia are the most common types. **Conclusion:** In our study strabismus and refractive errors are the most common causes of amblyopia. It is vital to detect amblyopia in early childhood by identifying conditions like refractive errors, cataract, strabismus, ptosis.*

Keywords: Anisometropic amblyopia, Strabismic amblyopia, refractive errors

1. Introduction

- Amblyopia and Strabismus are two common paediatric eye abnormalities.
- They have both functional and cosmetic consequences.
- Strabismus is one of the major causes of amblyopia.
- Amblyopia can be treated if diagnosed early.
- Despite treatment, amblyopia may result in subnormal vision.
- In general, the prevalence of strabismus in children - 0.13% to 4.7%
- The prevalence of amblyopia in children ranges from 0.2% - 6.2%
- Awareness regarding strabismus and amblyopia and its treatment is comparatively low in this part of the state.
- Till now there are no authentic studies to know the prevalence of strabismus and amblyopia in this part of the state.

2. Aims and Objectives

To evaluate the prevalence of Amblyopia in children aged 5 - 15 years with strabismus who visited the outpatient department of Maharajah's Institute of Medical Sciences between October 2020 - September 2021

3. Materials and Methods

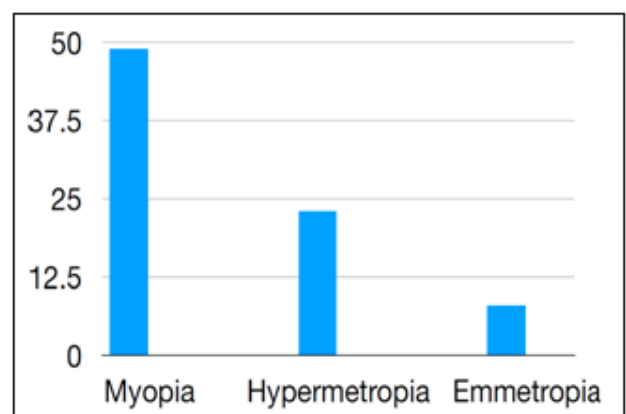
- 80 children aged 5 - 15 years with strabismus were enrolled in the study from the patients who visited the Ophthalmology outpatient department at Maharajah's Institute of Medical Sciences from October 2020 - September 2021.
- Inclusion criteria: children having strabismus with and without refractive errors.
- All the children underwent complete eye examinations including visual acuity, cycloplegic refraction and orthoptic evaluation. Detailed anterior segment and fundus evaluation was carried out to exclude other causes of amblyopia and strabismus.
- Refraction was carried out by the standard Snellen's visual acuity chart and Streak Retinoscopy.
- Cycloplegic refraction was done with Cyclopentolate 1% eyedrops.

- Ocular alignment was identified by the Hirschberg corneal light reflex test.
- In this study population, the type of strabismus and prevalence of amblyopia were analysed.
- Appropriate treatment was advised to all the patients.
- Written and informed consent was obtained from parents / legal guardians before enrolling into the study.

4. Results

- Age - The Average age is 11.03 ± 5
- Gender - M: F = 57: 23
- Refractive error - 49 (61.25%) are myopes, 23 (28.75%) are hypermetropes and 8 (10%) are emmetropes.
- 91.83% (45) are low myopes (< 3.5D), 8.13% (4) are moderate myopes (4 - 5.5D)

Refractive Error	n	%
Myopia	49	61.25
Hypermetropia	23	28.75
Emetropia	8	10



- Type of strabismus
- Prevalence of amblyopia

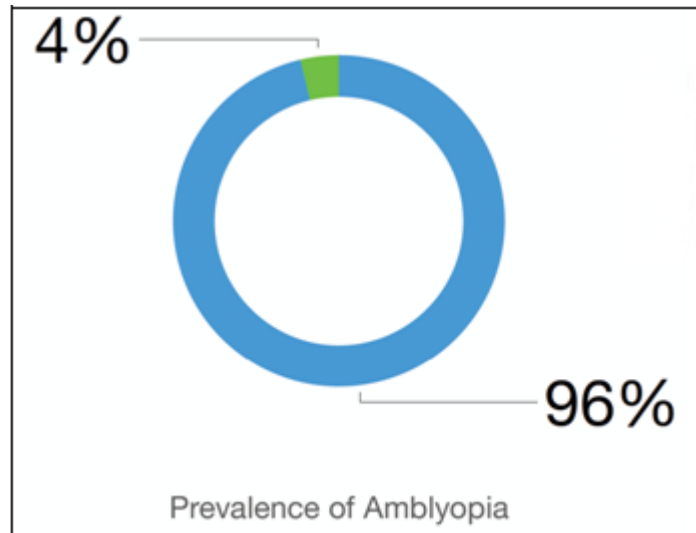
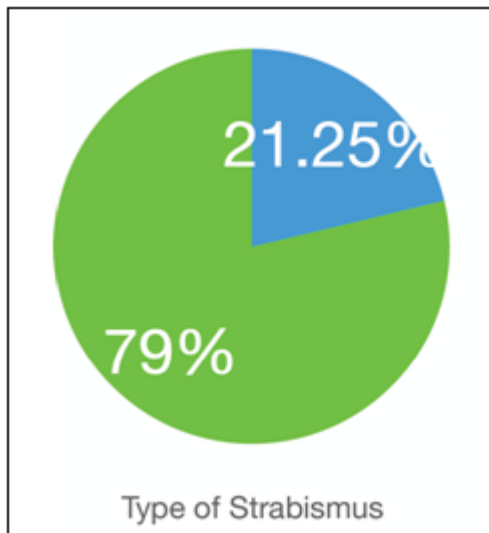
Type of Deviation	n	%	Amblyopia	%
Esotropia	17	21.25	3	3.75
Exotropia	63	78.75	0	0

Alternate among Exotropia	9	14.29%
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5. Discussion

- Hypermetropes should be identified early for the presence of amblyopia and treatment should be initiated as early as possible.
- Refractive errors and exodeviation are more common in children between 10 - 15 years age group, so proper screening of school children should be done during this age.
- The chances of amblyopia are minimal in myopes and those with exodeviation.
- Limitation of our study is small sample size and predominantly myopic refractive error. There are no significant numbers of anisometropia.

6. Conclusion

- Majority of the strabismic patients were myopes.
- Esodeviation is commonly associated with hypermetropia and amblyopia.
- The chance of amblyopia in myopes and exodeviation patients is less.
- We recommend a large sample size to validate our findings.

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