ISSN: 2754-4990

Journal of Ophthalmology Research Reviews & Reports

SCIENTIFIC Research and Community

Research Article

Open Access

Prevalence of Horizontal Strabismus in Pediatrics Patients at University Eye Hospital

Shir Mohammad Amirzda

Department of Ophthalmology, University Eye Hospital, Kabul University of Medical Sciences, P.O. Box 1006 Postal Code- 25000, kmu

ABSTRACT

Introduction: Strabismus is a clinical condition in which the eyes are not aligned properly and are pointed in different directions when looking at an object. Strabismus is a type of illness that requires medical and surgical treatment. If left untreated, amblyopia will increase the eyes of patients.

Objective: Prevalence of strabismus in children visiting at University Eye Hospital in March 25, and 21 September 2019.

Method and Materiel: The research design was cross-sectional study.The ophthalmology research site was university eye hospital. The total included cases were 1862 Strabismus patients the age was sixteen and under who were referred for examination and treatment of ocular diseases within the prescribed period. Age and sex information were collected from patients' files were analyzed using Microsoft excel. Patients by age were into four groups (0–1) years, (2–5) years, (6–10) years and (11–16) years.

Result: This study were examined the numbers of (1862) children in the 25 March to 21 September 2019 at the university eye hospital. Including their number of strabismus patients during the study was 3.59%. The average age is 9 years. The number of boys 37 (55.22%) and the number of girls is 30 (44.77%). The most common type of strabismus is the esotropia form (73.1%), exotropia were (26.9%). Alternate strabismus (55.2%), unilateral strabismus (44.8%).

Conclusion: This study shows that the most common type of strabismus was esotropia boys were more affected than girls.

***Corresponding author**

Shir Mohammad Amirzada, Department of Ophthalmology, University Eye Hospital, Kabul University of Medical Sciences, P.O. Box 1006 Postal Code- 25000, kmu. Email: shir.amirzada@gmail.com

Received: September 25, 2020; **Accepted:** September 30, 2020; **Published:** October 16, 2020

Keywords: Strabismus, Esotropia, Exotropia

Introduction

Strabismus is a clinical condition in which the eyes are not aligned properly and are pointed in different directions when looking at an object. Strabismus is a type of illness that requires medical and surgical treatment. If left untreated, amblyopia will increase the eyes of patients. Esotropia has previously been described to be more common mainly based on studies of the university eye hospital. In Japan and Indian studies exotropia has been described as more common owing to steady increase of intermittent exotropia over the years. There is a paucity of studies devoted exclusively to strabismus in children in university eye hospital [1, 2]. Awareness on the magnitude of strabismus burden in our population is crucial in preventing development of amblyopia, restore binocularity, aid in development of stereopsis and improve.

The objectives of the study were to determine the prevalence, and pattern of strabismus presentation in pediatrics patients at university eye hospital.

Inclusion Criteria

Age from 1 year to 16-year-old.

Exclusion Criteria

Age under than 1 year and above 16 years old.

Materials and Methods

The study design is a hospital based descriptive cross-sectional study conducted over a period of six months. The sampling technique used was a consecutive sampling method in which all children with manifest squint attending the OPD clinic university eye hospital from 25March to 21 September 2019 were recruited consecutively into this study. The data collected included patients, demographics, age at onset of the strabismus, characteristics of the deviation.

Data Analysis

Examination forms were cross-checked for completeness of data. All data were entered and analyzed using SPSS 25computer program. The prevalence of exotropia, esotropia, intermittent, strabismus, calculated in percentage and presented in tables and figures as descriptive statistics.

Results

This study were examined the numbers of (1862) children in the 25 March to 21 September 2019 at the university eye hospital. Including their number of strabismus patients during the study was (3.59) percent. The average age is 9 years. The number of boys 37 (55.2 %) and the number of girls was 30 (44.8%). The most common type of strabismus is the esotropia form (73.1%), exotropia were (26.9%). Alternate strabismus (55.2%), unilateral strabismus (44.8%). (Figure 1).

Sex

Male	37	55.2	55.2
Female	30	44.8	44.8
Total	67	100.0	100.0

Figure 1: Sex distribution at presentation (n=67)
Most of the patients (55.2%) were Male and (44.8%) were Female.

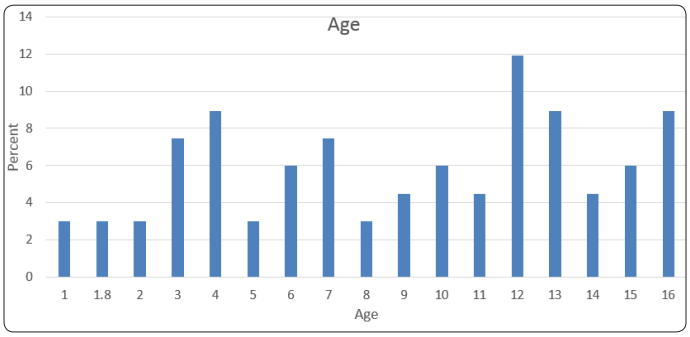

Figure 2: Age distribution at presentation (n=67)
Most of the patients (43%) were between (11-16) years of age. The Mean age was 9. 0388,
Range 15.00, Std. Deviation 4.68165, Minimum 1.00, Maximum 16.00years

Type of horizontal strabismus

Type of horizontal strabismus	Frequency	Percentage
Esotropia	49	73.1
Exotropia	18	26.9
Total	67	100.0

Figure 3: Type of horizontal strabismus distribution at presentation (n=67)
Most of the patients (73.1 %) were Esotropia, Exotropia (26.9 %).

Type of Fixation

Type of fixation	Frequency	Percent
Unilateral	30	44.8
Alternate	37	55.2
Total	67	100.0

Figure 4: Type of fixation distribution at presentation (n=67)
Most of the patients were Alternate strabismus (55.2%), unilateral strabismus (44.8 %).

Discussion

This was a cross sectional study conducted among 1865 children with strabismus attending the clinic of the University Eye Hospital. The aim of the study was prevalence strabismus among children in University Eye Hospital. The prevalence of strabismus in this study was 3.59 percent which was similar to the worldwide population based studies show a prevalence of 2-5% [1]. In a Hong Kong study involving (2704) strabismus patients, where males were 46.8% and females 53.2%It was different than that. esotropias (63.2%) were twice as common as exotropias (34%) [2, 6,7]. In Nigeria and Sudan reported a lower prevalence range of 0.5% to 2.6% [4]. A study published in India found that 9678 children had cross-sectional studies. The prevalence of strabismus is 59 (0.6) percent the proportion of males (55.22%) and females (44.77%) was has been noted. Its similar than that [4]. A study in Nigeria, congenital esotropia and accommodative esotropia constituted 50.0% and 18.8% of cases respectively while, exotropia constituted 31.3% [3]. Although, studies in Cameroon, Hong Kong and Asia have reported more exotropias compared to esotropies [2, 5]. It is slightly less than that. A study in India for males (56.6%) and females (43.4%). it was similar to our study. A study in India found that exotropia 34 (24%) and esotropia 16 (27.1%).it was different. A study in Nigeria found that 63.3 percent esotropia and 24 percent exototropia were consistent with our study. A study in India and colleagues found that patients between the ages of 3 and 10 were slightly different [4]. It is consistent with our study, a study in Iran found that patients are between the ages of six and 16 years. It was 40 percent female and 53 percent male [8]. It is similar whit our study.

Study limitations

1- Information missing on medical records could not be obtained.
2- This study was limited to the one a small hospital

Conclusion

This study shows that the most common type of strabismus was esotropia, alternate strabismus were more than unilateral strabismus, boys were more affected than girls.

Acknowledgements

The teams of the Research Committee of Kabul University of Medical Sciences, Curative Department Committee and Ophthalmology Department team UEH have cooperated for support and guidance during the research project.

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