

Research Article

A cross sectional study on pattern of eye diseases in pediatric age group

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ABSTRACT

Objective: To assess the pattern of eye diseases in pediatric age group at Al-Shifa Hospital Bahawalpur.

Methods: This study was conducted at the Department of Ophthalmology, Al-Shifa Hospital Bahawalpur from March 2018 to September 2018 over the period of 6 months. Total 1000 patients with ophthalmologic disorders was enrolled for the study from outpatient department of the hospital and pattern of eye diseases was assessed in selected patients.

Results: Mean age of the patients was 9.52 ± 4.6 years. Out of 1000 patients 460 (46%) patients were male and 540 (54%) patients were female. Most common 422 (42.2%) age group was 11-14 years. Most common disorder was refractive errors 334 (33.4%) followed by congenital cataract 243 (24.3%), VKC 221 (22.1%) and squint 118 (11.8%).

Conclusion: Male and female children were almost equally affected with ocular disorder and refractive error was the most common disorder in this study.

Key Words: Refractive errors, ophthalmology, consanguineous marriages, congenital, childhood blindness

INTRODUCTION:

In medical services, Ophthalmology is most very important speciality.¹ Ophthalmology unfortunately lags behind in this field of quality of life assessment even though our discipline and the organ with which we deal have a major impact on quality of life.² Ophthalmology disorders are equally prevalent in under developed and developed countries.¹

The high incidences of consanguineous marriages together with maternal infections and environmental factors are responsible for the significant proportion of congenital/developmental abnormalities in children. Other causes of childhood blindness include trauma and nutritional factors.³ In Saudi

Arabia the prevalence of blindness in children is 7.8% as reported by one study.⁴

In poor countries of the world corneal scarring due to vitamin A deficiency, ophthalmia neonatorum, trachoma and use of harmful traditional practices (TP) predominates.⁵

Increasingly, refractive errors is being recognized as an important cause of visual impairment in both children and adults, the type and magnitude of refractive errors clearly changes with advancing age and also appears to be changing overtime, with recent cohort having higher prevalence than earlier one. Visual acuity is the most appropriate screening test to identify individual with visual impairment due to uncorrected refractive errors.⁶

MATERIAL AND METHODS:

This study was conducted at the Department of Ophthalmology, Al-Shifa Hospital Bahawalpur from March 2018 to September 2018 over the period of 6 months. Total 1000 patients with ophthalmologic disorders was enrolled for the study from outpatient department of the hospital. An approval was taken institutional review committee and informed written consent form the parents of children was taken. A standard proforma was designed to collect the data. On the anatomical basis the ophthalmic disorders were divided into disorders affecting conjunctiva, cornea, whole globe, retina, lens, uvea, nerve, optic ocular muscles, nasolacrimal and refractive system. Detailed ocular examination was done for decision making, training and teaching purposes. Refraction was performed routinely under cycloplegia. Anterior segment examination was done with torch and slit lamp. Examination of the posterior segment was performed after dilating pupil using direct and indirect ophthalmoscope and fundus contact lenses. Intraocular pressure (IOP) was checked with Perkins tonometer.

Figure No.1

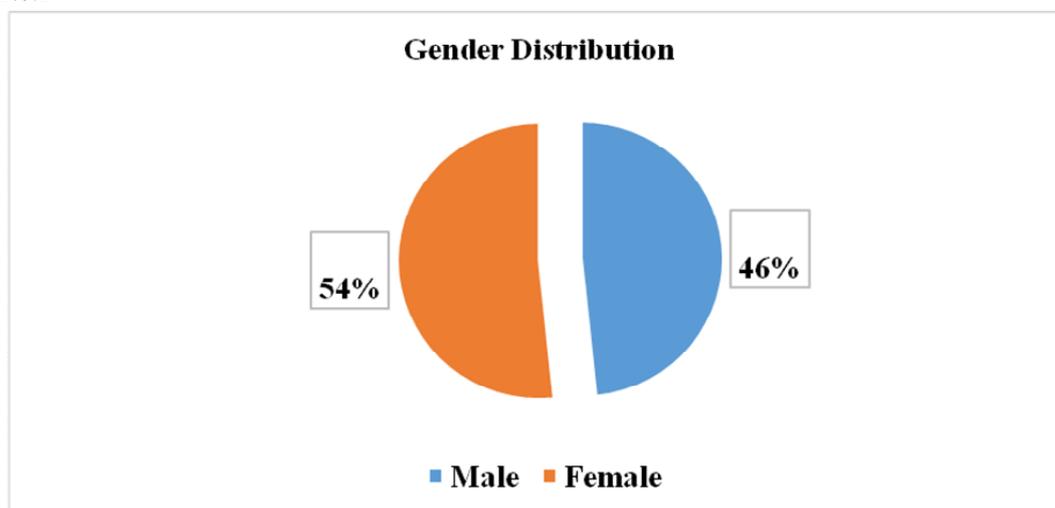


Table No.1: Age distribution of study subjects

Age Group	Frequency	Percentage
0-5	295	29.5
6-10	283	28.3
11-14	422	42.2
Total	1000	100

Assessment of the squint was done in detailed way by using prisms and tests for stereopsis. All the collected data were entered in SPSS version 16 and analyzed. Mean and SD was calculated for numerical i.e age, categorical data was presented as frequency and percentage.

RESULTS:

Total 1000 having ophthalmic disorder were enrolled in the study. Mean age of the children was 9.52 ± 4.6 years. Out of 1000 patients 460 (46%) patients were male and 540 (54%) patients were female. (Figure 1)

Out of 1000 patients 295 (29.5%) patients belonged to age group 0-5 years, 283 (28.3%) patients belonged to age group 6-10 years and 422 (42.2%) patients belonged to age group 11-14 years (Table No.1). As shown in table No.2 refractive errors were present in 334 (33.4%) patients, retinitis pigmentosa was present in 27 (2.7%) patients, congenital cataract 243 (24.3%), VKC 221 (22.1%), squint 111 (11.8%), congenital glaucoma 22 (2.2%) and NLD Block in 35 (3.5%).

Table No.2: Classification of ophthalmic disorders

Disease	Frequency	Percent
Refractive errors	334	33.4
Retinitis Pigmentosa	27	2.7
cong. cataract	243	24.3
VKC	221	22.1
Squint	118	11.8
Cong. Glaucoma	22	2.2
NLD Block	35	3.5
Total	1000	100.0

DISCUSSION:

In our study male patients were 46% and female patients were 56%. Fasih et al⁷ reported in their study male patients as 59.50% and female patients were 40.5% which is in favor of study. But in one study, frequency of male patients with ophthalmic disorders was 68.9% and female patients was only 31.8% which is in contrast with our study.⁸ This difference may be due to socio-economic factors of our society.

Uncorrected refractive errors have a direct effect on learning capabilities of the children and their education.⁹ Most frequently reported disease in our study was refractive errors which was found in 33.4% children. Iqbal et al¹⁰ reported 62.9% children with refractive errors in his study. This is almost double than our finding. In another study by Fasih U et al refractive errors was found in 8.11% children.⁷ Studies by Sethi S et al⁸ and Khan MA et al¹¹ was also in contrast with our study. Refractive errors were the commonest in children and adolescents. They predominate but their number at OPD clinics varies from day to day.

Congenital cataract disorder was found in 24.3% children in our study. This high percentage found in our study is due to many factors one of them is that patient's parents pay many visits to OPDs before taking decision of surgery.¹²

VKC is an immunopathological disorder of which the number of mast cells in substantia propria increases. Activation of mast cells by IgE bound receptor crosslinking by allergen promotes the

release of many mediators like histamine, prostaglandins and cytokinase, all of which contribute to the symptoms of VKC. The mast cell is considered to play a pivotal role in producing symptoms and signs of VKC.¹³

Vernal conjunctivitis which is an allergic form of conjunctivitis was found in 22.1% patients in our study. Similar 21.1% results were reported by Hassan M et al.¹⁴ Results of Ajayeobaet al¹² and Iqbal Y et al¹⁰ were in contrast with our study. This disease usually results from allergic materials such as dust. Also chemical conjunctivitis could result from inappropriate instillation of eye drugs from self-medication. Also traditional eye remedy which had been found to be dangerous is usually on display in open market.¹⁵ Many publications had documented the role of traditional healers and their medications in most African communities and had observed that harmful traditional eye medication could lead to blindness.¹⁶

In our study 11.8% found with strabismus. Sethi et al¹⁷ found similar results 13.5% in North West Frontier Province. Onakpoya OH et al¹⁸ found strabismus as 15.9% which is also comparable with our study.

Congenital glaucoma was found in 2.2% children. Similar results 0.81% were found by Fasih U et al⁷ in their study. Sethi S et al⁸ also found congenital glaucoma in 0.99% children.

The prevalence of congenital glaucoma varies among different ethnic groups and geographic locations with the highest recorded prevalence found in the Nomadic population of Slovakia

followed by the general populations of the Middle East and the western nations.⁸

CONCLUSION:

Male and female children were almost equally affected with ocular disorder and refractive error was the most common disorder in this study.

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