



# Prevalence of eye diseases in children's attending ophthalmology OPD in University Eye Hospital

Kabul –Afghanistan

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## Abstract

**Introduction:** Eye diseases in children, in addition to the occurrence of blindness in society, play an important role in their education. Eye diseases in children affect the ability to learn, adapt to school and individuals. Prevention and treatment of eye diseases further prevent blindness, therefore they need immediate attention. Early diagnosis and treatment of eye diseases in children is very important.

**Objective:** Prevalence of eye diseases in children visiting at university eye hospital in the sixth months of 2022

**Method and Materiel:** The Research design was Cross-sectional- Descriptive-Study. The ophthalmology research site was university eye hospital. The total included cases were 1429 pediatric 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 and SPSS-25. Patients by age were into four groups (0–1) years, (2–5) years, (6–10) years, and (11–16) years.

**Result:** The first 6 months of 2022 at the University Eye Hospital 1429 were examined, including 772 (54%) male, 657 (46%) female, most patients were between the ages of 11 to 16 years, 418 allergic conjunctiva (29, 25%), refraction error 399 (27.92%), bacterial conjunctivitis 213 (14.90%) cataract 106 (7.5%), viral conjunctiva 92 (6.4%), blepharitis 43 (3%), dacryocystitis (NLDO) 43 (3%), vitamin-A-deficiency 22 (1.5%), glaucoma 25 (1.74%), trauma 1 (0.76%), retinoblastoma 7 (0.48%) included.

**Conclusion:** This study shows that children have the highest incidence of allergic inflammation, refractive error and men are more affected than women.

**Key Words:** Pediatric eye diseases, Allergic Conjunctivitis, Refractive error

## Introduction

The causes of blindness and low vision in children vary in different countries and societies. The need for eye services also varies according to the needs of the natives. Studies showing the pattern of pediatric eye disease are needed to build better infrastructure for eye care centers. Eye diseases in the age of children, morbidities among pediatric age group play a major role in their education in addition to occurrence of blindness in our community. Ocular disease in children affects learning capacity, adjustment in school, and personal [1, 2]. Overall, 39 million people are blind worldwide, out of which 1.4 million are children (less than 14 years of age). In a survey on children  $\leq 15$  years of age,

**Purpose:** The aim of our study was to find the prevalence of eye diseases in children referred to the university eye hospital in the first six months of 2022.

**Method and Materials:** The research design was Cross-Sectional Descriptive-Study. The research site of the university eye hospital of Kabul University of Medical Sciences is "Abu Ali Ibn Sina". Materials including the files of all patients aged 16 years and under, who had referred OPD Clinic of University Ophthalmology Hospital for examination and treatment of eye diseases from the second day of birth until the last of September 2022 have been studied. 1429 patients have been studied. Data on age, sex, and diagnosis of patient files were analyzed by Microsoft Office Excel. Patients are divided into four groups in terms of age (0-1) years, (2-5) years, (6-10) years and (11-16) years.

## Results

In this study, a total of 10922 patient 1429(13.08%) cases children were collected, 772 (54%) patients were male and 657 (46%) patients were female who had referred to the OPD of University Eye Hospital for examination and treatment during the six months of 2022. In terms of age, most patients were aged 11 to 16 years. Percentage of ocular diseases: 418 patients (25.29%) with allergic conjunctivitis s, 399 patients with refractive errors (27.92%), 106 patients with cataracts (5.7%), 92 patients with viral conjunctivitis (4.6%), 3 patients (3%) , Lacrimal duct inflammation 43 patients (3%), patients with vitamin A 22 deficiency (1.5%), bacterial conjunctivitis 213 patients (14.90%), glaucoma 25 patients (1.74%), trauma 11 patients (7%)% Phlectinular keratoconjunctivitis 10 patients (0.6%), retinoblastoma in 7 patients (0,48%). This is shown in the following tables.

**Table-1:** sex distribution of children

Sex	Boys	Girls	Total
No	772	657	1429
Percentage	54.023%	45.977 %	100

Table -1

**Table-2:** Ocular morbidity distribution with respect to Sex

Diseases	Boys	Girls	Total
Allergic conjunctivitis	270(18.89 %)	148 (10.36%)	418 (29.25%)
Refractive Error	176(12.31 %)	223 (15.61 %)	399 (27.92 %)
Bacterial Conjunctivitis	110 (7.69 %)	103(10.21 %)	213(14.9 %)
Blepharitis	22(1.53 %)	21 (1.47 %)	43(3 %)
Cataract	66 (4.66 %)	40(2.84 %)	106(7.5 %)
Viral Conjunctivitis	48(2.89 %)	44(3.51 %)	92(6.4 %)
Strabismus	21(3.03 %)	15(2.17 %)	36(5.2 %)
Nasolacrimal duct occlusion	20(1.39 %)	23(1.61 %)	43(3 %)
Phlectinular conjunctivitis	7 (0.42 %)	3(0.18 %)	10(0.6 %)

glaucoma	13(0.90 %)	12(0.84 %)	25(1.74 %)
Vitamin A- Deficiency (Bitot spot)	8 (0.54 %)	13(0.96 %)	22(1.5 %)
Retinoblastoma	3 (0.20 %)	4((0.28 %)	7(0.48 %)
Trauma	5 (0.34 %)	6(0.42 %)	11(0.76 %)
<b>Total</b>	<b>772(54.023 %)</b>	<b>657 (45.977 %)</b>	<b>1429(100 %)</b>

Table 2, represents ocular morbidities with sex wise distribution respectively.

**Table-2:** Distribution of childhood eye diseases across age groups

Diseases	Age group years (%)			Total (%)
	1-5 (%)	6-10 (%)	11-16 (%)	
Allergic conjunctivitis	119(8.32 )	132 (9.23 )	167 (11.7)	418 (29.25)
Refractive Error	96(6.91)	116(8.11)	187(12.9)	399(27.92)
Bacterial Conjunctivitis	100(6.99)	52(3.63)	61(4.28)	213(14.9 )
Blepharitis	8(0.55)	15(1.04)	20(1.41)	43(3)
Cataract	36(2.54)	30(2.12)	40(2.84)	106(7.5)
Viral Conjunctivitis	20(1.39)	32(2.22)	40(2.79)	92(6.4)
Strabismus	15(2.16)	10(1.44)	11 (1.6)	36(5.2)
Nasolacrimal duct occlusion	29(2.02)	7(0.48)	6(0.5)	43(3)
Phlectinular conjunctivitis		4(0.24)	6(0.36)	10(0.6)
glaucoma	9(0.62)	12(0.83)	4 (0.29)	25(1.74)
Vitamin A Dif (Bitots spot)	9(0.61)	8(0.54)	5(0.35)	22(1.5)
Retinoblastoma	7(0.48)			7(0.48)
Trauma	2(0.13)	4(0.27)	5(0.36)	11(0.76)
<b>Total</b>	<b>435 (32.72)</b>	<b>422(30.15)</b>	<b>552(37.13)</b>	<b>1429 (100)</b>

## Discussion

In our study, 54% patients were male and 46% patients were female who had referred to the OPD of University Eye Hospital. A study Annamalai T.T. et, al, 45.02% were males and 54.98% female [1,2], A study Onakpoya OH et,al, 48.3% males and 51.7% females [3], A study Darraj et al 53.2% girls and 46.8% boys [4] it is different from our study, A study Biswas J et al , 58.26% males 41.74% females. That was similar to our study. The majority of ages were (55.5%) between of 11 and 16years. This was similar to the findings [1, 2, 3 4, 5, 6, 7] Allergic conjunctivitis It is seen that maximum number of children had (29.25%) in the present study showing a higher prevalence of allergic conjunctivitis than in the studies done by Annamalai T.T. et, al, Kumar R. et,al,(19.1%),[1-2], Onakpoya OH. et,al,17.8% [3], Darraj et al 1.30% [4], Singh V, 1.90% [5], Khalil A. et, al, 17.23 % [6] it was less than our study. Refractive errors also number of children had refractive error (27.92%) in the present study, showing less than prevalence of refractive error than in the studies done by Biswas J et studies done by Annamalai T.T. et, al, Kumar R. et,al al(23.67%)[,1,2,],higher than Onakpoya OH,et,al,14.3% [3] similar to [4,6]. Percentage cataracts Onakpoya OH. et, al (6.6%) [3], similar with our study, ], Darraj et al ( 2.30% ) [4] Singh V, et,al,( 0.17% ) [5], Khalil A. et, al, (2.24%) [6] less than our study. Bacterial conjunctivitis the studies done by Annamalai T.T. et, al, Kumar R. et,al,( 4.6%), (15.4%)[3], ( 7.30% ) [4] Singh V, et,al, 11.10% [5] less than our study and study by Khalil A. et, al,15,13% [6] similar to our study. Prevalence of Strabismus was in Annamalai T.T. et, al (2.2%) Kumar R, [1-2], Onakpoya OH, et,al,(2.4) [3], Singh V,et,al,(0.46%) [5]. in our study, Lacrimal duct inflammation (3%), similar to the studies done by Annamalai T.T. et, al, (2.60%) [3, 4] and less done by Khalil A. et, al,( 20.4%)[6]. Blepharitis in study done by Khalil A. et, al, (11.4%) [3] ,higher than our study and Singh V,et,al (1.46%) [5].less than our study. Prevalence strabismus in study done by Kumar R. et, al (36.9%) [4] It is higher than our study (5.2%) and similar to study done by Khalil A. et, al,(6, 6.19%)[6].prevalence glaucoma in our study is (1.74%),it is similar 4(1.4) [3], 2.60% ,[4] 2.028% [6] more than Singh V, et,al 0.007% [5].prevalence Vitamin A deficiency in study done by Singh V, et,al (3.29% [5] Khalil A. et, al (5.07%) [6]. more than our study (1.5%).prevalence ocular trauma in study done by Onakpoya OH, et,al (21.7%). Khalil A. et, al (12.74%) [3, 6], A study done by Kumar R. et, al (7.50%) [4] it is similar than our study.

**Conclusion:** This study shows that children have the highest incidence of allergic inflammation, refractive error and men are more affected than women.

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