

Ocular Disease Profile of Rohingya Refugees Seeking Tertiary Care

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Abstract

Background: The enormous numbers of Rohingya refugees have limited access to healthcare facilities, resulting in higher health risks as well as ocular morbidity. A tertiary hospital can provide better care for ocular conditions that cannot be managed by primary care. Chittagong Medical College Hospital (CMCH) serves as the largest tertiary care facility for the southeastern region of Bangladesh by United Nations High Commissioner for Refugees (UNHCR). The study was aimed to determine the ocular diseases profile of Rohingya refugees seeking tertiary care admitted into Ophthalmology Department, CMCH.

Materials and methods: Retrospective study on ocular diseases of Rohingya Refugees (n=207) over a period of 5 years from 1st September, 2017 to 31st August, 2022.

Results: Out of 207 Rohingya Refugees, 59% were males and 41% were females with a ratio of 1:1.4. The highest patients were found in the age group 20-29 years (29.5%); the mean age was 21.31 (\pm 15.631) years (Range: 0-80). Ocular trauma was found as the most common eye disease among our study population (47.3%) followed by orbital cellulitis (6.8%), glaucoma (5.8%), corneal opacity (4.3%) and corneal ulcer (4.3%). The most patients presenting visual acuity were <1/60-Perception of light (46.9%). A total of 33 (15.9%) cases had no light perception during admission.

Conclusion: The primary health care providers can work on to create awareness among the Rohingya refugees on ocular diseases, help them to remove the social barriers and taboos. So that definite and timely interventions will save their vision.

Key words: Ocular diseases; Ocular trauma; Rohingya refugees.

Introduction

The Rohingya are a minority ethnic group residing in the Rakhine state of Myanmar, which is next to Cox's Bazar district in Chittagong division. According to UN estimates, in late September 2017, approximately 10,000 Rohingya were killed and over 730,000 fled into Bangladesh.¹ Ukhiya and Teknaf Upazilas are home to more over 943,000 stateless Rohingya refugees as of October 2022. The bulk of Rohingya refugees reside in 34 densely populated camps.² These enormous numbers of displaced people have limited access to healthcare with higher health risks.³ Evidence suggests that the prevalence of vision impairments and blindness among refugees are common and often higher than the general population. A recent systematic review found that the prevalence of blindness in the refugee camps can range from 1.3% to 26.2%.⁴

Globally, at least 2.2 billion people have a near or distance vision impairment due to unaddressed refractive error, cataract, age-related macular degeneration, glaucoma, diabetic retinopathy, presbyopia.^{5, 6} In a recent study, among Rohingya refugees, Cataract was responsible for 75.0% of blindness (<3/60) and 75.8% severe visual impairment (>3/60 to 6/60).⁷ Most of the ocular conditions of Rohingya refugees were managed by local government or non-government organizations. Ocular conditions that cannot be treated by primary care are taken to a tertiary hospital for better treatment.

United Nations High Commissioner for Refugees (UNHCR) supports 28 healthcare facilities to provide quality lifesaving and comprehensive primary and secondary health services for all refugees and to refer them to tertiary care when needed.⁸ Chittagong Medical College Hospital (CMCH) is located in the south-eastern region and serving as the largest tertiary care facility for UNHCR.

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We frequently treat patients from Rohingya refugee camps. So, in view of public health importance, we decided to do ocular disease profile of Rohingya refugees admitted at Ophthalmology Department, CMCH. This will serve as the foundation for appropriate stack holders to plan and implement preventive and curative actions so that timely intervention can prevent vision loss and protect the eyes among Rohingya refugees.

Materials and methods

A hospital based retrospective study was carried out on ocular diseases of Rohingya refugees admitted in Department of Ophthalmology, CMCH. It included total 207 patients that were admitted from 1st September, 2017 to 31st August, 2022.

Rohingya refugees referred for ocular diseases by other department of our hospital were excluded. Patients who were admitted to the Ophthalmology department through the Outpatient and Emergency Department were included in our study.

Data collected from register records of admitted patients in Ophthalmology Department, CMCH which included name, gender, visual acuity at presentation and diagnosis were exported as Microsoft Excel sheets from the data collection form, and statistical analysis was performed using the IBM SPSS-23.0 Statistics software. Variables were presented as numbers and percentages. Necessary permission was obtained from proper authority before start the study.

Results

Table I Age distribution (n=207) of Rohingya refugees

Characteristics	Frequency	Percentage (%)	
Age	Years		
Age category	0-9 years	56	27.1
	10-19 years	41	19.8
	20-29 years	61	29.5
	30-39 years	23	11.1
	40-49 years	10	4.8
	50-59 years	10	4.8
	60 years & above	6	2.9
Mean (±SD)	21.31 (±15.631)		
Range	0-80		

SD: Standard Deviation, Data are expressed as frequency (Percentage).

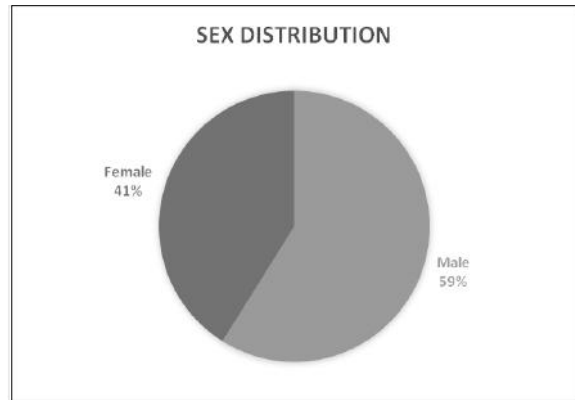


Figure 1 Sex distribution (n=207) of Rohingya refugees

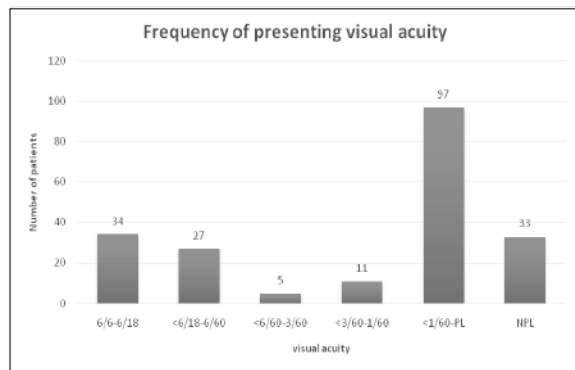


Figure 2 Presenting Visual Acuity (According to WHO’s classification of visual impairment) among Rohingya refugees (n=207)

NPL: No Perception of Light, PL: Perception of Light, HM: Hand Movement.

Table II Clinical profile of ocular diseases among Rohingya refugees (n=207)

Diagnosis	Number of patients	Percentage (%)
Ocular Trauma	98	47.3
Eyelid lesion	8	3.9
Orbital Cellulitis	14	6.8
Lacrimal abscess	6	2.9
Conjunctival lesion	7	3.4
Corneal opacity	9	4.3
Corneal Ulcer	9	4.3
Complicated Cataract	7	3.4
Congenital Cataract	5	2.4
Glaucoma	12	5.8
Uveitis	2	0.9
Retinitis pigmentosa	5	2.4
Optic neuropathy	3	1.5
Endophthalmitis	5	2.4
Staphyloma	8	3.9
Phthisis bulbi	4	1.9
Painful blind eye	5	2.4

Discussion

In our study, the mean age of Rohingya refugees admitted in CMCH for ocular diseases was 21.31 (± 15.631) years (Range: 0-80). Among the 207 Rohingya refugees, the highest number of patients suffered from ocular disease was 61 (29.5%) and their age ranged from 20-29 years followed by 56 (27.1%) ranged 0-9 years. The number significantly decreased when the age was increased. The current study found that male patients outnumbered female patients by 122 (59%) to 85 (41%) with a ratio of 1:1.4. According to a research by Ahmed et al. the prevalence of untreated vision impairment among the Rohingya community in Cox's Bazar was higher in children aged 5 to 11 and in individuals over 60 years.⁹ In another study which was conducted among different nationalities attending United Nations Hospital by Baranwal et al. showed the patients mostly were in the age group of 30-40 years and 40-50 years.¹⁰ A study conducted in the Southern Region of Bangladesh showed most common group was above 50 years and male patients were preponderance than female.¹¹ This discrepancy may be mostly attributed to factors associated to the patients' ocular conditions. People of working age and parents of children are more concerned about their visual consequences. Moreover, they are the active population engaged in various activities which may support our findings.

Ocular trauma was found as the most prevalent eye disease among our study population (47.3%) followed by orbital cellulitis (6.8%), glaucoma (5.8%), corneal opacity (4.3%) and corneal ulcer (4.3%). Among 98 ocular trauma patients, open globe injury was most common 51 (52.0%) than closed globe injury 32 (32.7%) followed by adnexal injury 9 (9.2%) and chemical Injury 6 (6.1%). Penetrating corneal injury was the most common clinical presentation of open globe injury. Among the patients, complicated cataract accounted for 7 (3.4%) followed by congenital cataract 5 (2.4%). Hussain et al. and Ahmed et al. reported the large majority of vision loss was due to uncorrected refractive error and unoperated cataract.^{8,9} Most of the studies found refractive error, cataract and allergic conjunctivitis as most common clinical presentation.¹¹⁻¹⁷ When compared to other studies, the incidence of age-

related cataract and refractive error was not observed in our study because we included Rohingya refugees who required tertiary care as subjects. Rohingya refugees frequently engage in various social and political conflicts among themselves which matches our data. May be ocular trauma were commonly found as a result of physical assault and as well as unintentional injury.

According to the study, the most patients presenting visual acuity were $<1/60$ -Perception of light, and it was 46.9%. A total of 33 (15.9%) cases had no light perception during admission. Visual acuity at presentation was 6/6-6/18 only in 16.4% of the cases in our study. Ahmed et al. reported the prevalence of blindness (Presenting acuity $<3/60$) among Rohingya patients exceeded by 3- to 6-fold that among local residents between 18 and 59 years old.⁹ This is due to a delay in referring the patient to our department. In fact, the elderly is frequently ignored and neglected by themselves as well as the near ones.

Most of this variation might be explained by infrastructure to the patient's ocular care services. This study's findings reflect the prevalence of different ocular diseases, mainly due to those ocular conditions that could not be treated by primary care services and specially need tertiary healthcare support.

Limitation

As a result of the study population being restricted to Rohingya refugees who require tertiary healthcare services, our study's inherent limitation of lesser subjects was evident.

Conclusion

The Rohingya refugees are uneducated and ignorant. Access to tertiary medical care is also restricted. Despite prompt treatment, the severity of ocular conditions might result in catastrophic and irreparable vision loss as well as diminished quality of life. The primary health care providers can work on to create awareness among the refugees on ocular diseases, help them to remove the social barriers and taboos. So that definite and timely interventions will save their vision.

Recommendation

Considering the complicated epidemiology of visual impairment and the wide variety of factors

involved, region specific intervention strategies are required. A long-term database of all ocular diseases in the country is suggested to facilitate larger-scale research and the development of ocular morbidities prevention measures.

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Contribution of authors

MSA-Conception, acquisition of data, drafting & final approval.

MAH-Acquisition of data, data analysis, critical revision & final approval.

MH-Design, critical revision & final approval.

US-Data analysis, interpretation of data, drafting & final approval.

TT-Design, interpretation of data, critical revision & final approval.

Disclosure

All the authors declared no competing interest.

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