

An Observational Assessment of the Clinic-Demographic Profile of Patients Attending Ophthalmic Clinic during Peaks of Covid Pandemic

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Abstract

Aim: To enumerate various ocular symptoms of patients presenting to Ophthalmology outpatient clinic during covid pandemic period, evaluate their demographic profile and to identify any ocular manifestations of corona virus amongst these patients.

Material & Methods: This is a prospective study done in the Department of Ophthalmology, Bhagwan Mahavir, Institute of Medical Sciences, Pawapuri, Nalanda, Bihar, India and private hospital over a period of 5 months. Random sampling method was followed. Sample size was calculated based on Open-Epi software and it is approximately 400.

Results: Majority of patients presented the chief complaint of itching (49%) followed by redness (33.2%) and foreign body sensation (25.2%). The diagnosis related to ocular ailments were detailed in Table 4. Majority of patients presented Conjunctiva diseases (37.5).

Conclusion: In our study, majority of patients presented with itching, foreign body sensation and diagnosed mostly as conjunctivitis, predominantly viral. Most of the patients are males and in working age group.

Keywords: ophthalmic clinic, covid pandemic, conjunctivitis

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Introduction

The COVID-19 pandemic, caused by the highly contagious virus named SARS-CoV-2, spread turmoil in the year 2020 and the world is still battling this disease. The spectrum of illness ranged from asymptomatic infection to severe pneumonia with acute respiratory distress syndrome (ARDS), septic shock and death. [1-2]

The entire spectrum of the disease is still not known, with multiple presentations

being reported involving multiple organs, including the eye. Studies conducted in China first reported conjunctivitis as a common manifestation of coronavirus disease. [3-4] Ever since many other ocular manifestations, though not so common, have been reported, including episcleritis, lid margin telangiectasia/hyperaemia, retinal venous and arterial occlusions, choroiditis, optic

neuritis, orbital cellulitis and mucormycosis among many others. [5-9]

Emergency eye care is of utmost importance and must be provided to all patients in need. The imposed lockdown restrictions leading to decreased access to care due to the unfortunate circumstances of the pandemic only compounds the problem. Practice guidelines to consider during the lockdown period for ophthalmologists include triaging of patients to cater to emergencies, modified patient flow in the outpatient department and operation room, use of personal protective equipment, infection control, and management of manpower, among others. [10]

The study aims to enumerate various ocular complaints of patients presenting to ophthalmology OPD during covid pandemic period and evaluate their demographic profile and to identify any early ocular manifestations of corona virus amongst these patients.

Material & Methods:

This is a prospective study done in the Department of Ophthalmology, Bhagwan Mahavir, Institute of Medical sciences, Pawapuri, Nalanda, Bihar, India and private hospital over a period of 5 months, after obtaining approval from institutional ethics committee board of our Institute (AIIMS/MG/IEC/20-21/62). Clearance from Institutional Ethics Committee Board was taken after duly submitting the detailed project by following declaration of Helsinki protocols.

Methodology

Random sampling method was followed. Sample size was calculated based on Open-Epi software and it is approximately 400. All adult patients presenting to ophthalmology OPD were included in the study and patients who had long standing eye ailments before Covid pandemic and those referred patients from other departments for screening diabetic retinopathy, ocular trauma, ocular foreign body and paediatric age group patients were excluded from the study. Ocular examination was done by Slit lamp biomicroscopy. P value less than 0.05 was considered statistically significant. P value was calculated by chi square test based on Open Epi software 2x2 table.

Results:

There was a total of 400 patients during the study period, Male-285 (71.3%), Female 115 (28.7%) (Table 1). The common age group was between 20 to 40 years (64%), followed by 40 to 60 years (30.75%) (Table 2). Majority of patients presented the chief complaint of itching (49%) followed by redness (33.2%) and Foreign body sensation (25.2%) (Table 3). The diagnosis related to ocular ailments were detailed in Table 4. Majority of patients presented Conjunctiva diseases (37.5) and Refractive errors (30%). Treatment given was medical (75.2%), spectacles (23.5%) and laser procedures (1.25%) (Table 5).

58 patients had undergone RT-PCR test, and remaining patients refused. 16 patients (27.5% of patients tested) turned to be Covid positive, others turned to be negative.

Table 1: Gender distribution

Total number of patients	Males	Females
400	285 (71.3%)	115 (28.7%)

Table 2: Age group distribution

Age group	Number of patients	Percentage
20-40 years	256	64
40-60 years	123	30.75

60 years and above	19	4.75
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Table 3: Chief presenting complaints

Chief presenting complaint	Total number of patients	%	Males	%	Females	%	Pvalue
Itching	196	49	162	40.5	80	20	0.005
Redness	133	33.25	93	23.25	51	12.75	0.01
Foreign body sensation	101	25.25	67	16.75	40	10	0.01
Watering	78	19.5	58	14.5	28	7	0.173
Defective vision due to cataract	45	11.25	26	6.5	17	4.25	0.01
Defective vision due to Refractive error	88	22	79	19.75	38	9.5	0.583
Diabetic Retinopathy	21	5.25	18	4.5	5	1.25	0.330

Table 4: Ocular ailments

Ocular ailments	Total number of patients	Percentage
Refractive errors	120	30
Ocular adnexa diseases	28	7
Conjunctiva diseases	150	37.5
Cornea diseases	12	3
Lenticular diseases	43	10.75
Glaucoma diseases	18	4.5
Uvea diseases	6	1.5
Vitreous diseases	1	0.25
Retina/Macular diseases	18	4.5
Neuro ophthalmology diseases	4	1

Table 5: Management patterns

Treatment	Number of patients	Percentage
Medical Treatment	301	75.25
Spectacles	94	23.5
Laser procedures	5	1.25

Discussion:

There is many important socio-determinants of health that need to be identified among the vulnerable groups such as children, elderly, women, lower socioeconomic strata of patients and residence in a geography with limited access to care. [11]

National published guidelines serve as a very important measure to have clarity in triaging patients in times of crisis such as this. [7] There is a similar guideline published for Ophthalmology from

experience from the epicenter of the COVID-19 outbreak in Europe from the city of Bergamo. [12] It is very important to balance the provision of patient care services and minimize the risk of exposure to the hospital staff from suspected COVID-19 positive patients. Analysis of the electronic medical records of the current distribution of patients presenting with various ocular disorders lends valuable insight to strategize the plan for future eye care services.

There should be every effort made possible to minimize the hospital visits of the routine non-emergency patients till the stabilization of the COVID-19 crisis and the use of telemedicine protocol is encouraged by eye care institutions to continue to provide timely advice to our patients. [13]

Prevalence of conjunctival congestion in previous Studies [14-20] conducted in China showed variable results of 0.81%, 3.33%, 4.68%, 31.57%, 1.1%, and 3.57%. The difference in prevalence might be due to difference in sample size between various studies, severity of COVID-19 cases (mild, moderate, severe) included in the study, population characteristics between China and India, awareness of people regarding ocular hygiene, differences in the day of examination of patients and due to lack of detailed ocular examination and investigation to confirm the SARS-Cov2 nucleic acid in conjunctival swab.

As TeleOphthalmology was also in place, vaccination to corona virus was not done during that time, we avoided all elective surgeries. Laser procedure for Diabetic Retinopathy was done for 4 patients. During pandemic period, it is not advisable for patient and doctor to perform active surgeries unless needed. Several study recommended only emergency ocular surgeries and postponement of elective surgeries. [21] Tele-ophthalmic consultation was adopted in most of the institutions. [22,23]

Conclusion:

In our study, majority of patients presented with itching, foreign body sensation and diagnosed mostly as conjunctivitis, predominantly viral. Most of the patients are males and in working age group.

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