

Frequency Of Ocular Symptoms In Covid-19 Patients

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Author's Contribution

^{1,2} Conception of study

^{1,2} Experimentation/Study Conduction

^{1,2,3,4,5,6} Analysis/Interpretation/Discussion

^{1,2} Manuscript Writing

^{1,3,4} Critical Review

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Abstract

Objective: To determine the frequency of ocular symptoms in COVID-19 patients and their association with systemic symptoms in active COVID-19 patients.

Methods: This is a cross-sectional observational study of laboratory-confirmed COVID-19 patients who were admitted to isolation wards in Benazir Bhutto Hospital, Rawalpindi (BBH) for a period from Dec 16, 2020, to Jan 15, 2021. A structured form was used to extract the data from electronic medical records. Data collected included sociodemographic characteristics, presenting symptoms, systemic signs and symptoms, ocular symptoms, past medical history, RT-PCR, and chest radiographic findings.

Results: A total of 44 patients (30 (68.2%) males and 14 (31.82%) females) were admitted to the isolation wards during the study period. The mean age (\pm SD) age was 55.75 ± 14.53 with a median range of 57.50 (14-92). Age <30 years i.e., 4.5%, 30-50 i.e., 27.3% and >50 i.e., 68.2%. Ocular symptoms were present in 17 patients (38.6%).

Keywords: Ocular symptoms in COVID-19, Red eye in COVID-19.

Introduction

In December 2019, a number of mysterious pneumonia cases discovered in the city were reported by CDC Wuhan. It was Le Wenliang, a Chinese ophthalmologist, working at Wuhan Central Hospital, who reported a patient with suspected SARS, which was later confirmed as a new Corona virus^{1,4}. The viral infection rapidly spread within China and subsequently to many other countries⁵. In January 2020, WHO declared it a pandemic, and the virus isolated from the infected individuals was named SARS-CoV-2 (Severe Acute Respiratory Syndrome Corona Virus 2) and the outbreak was named COVID-19 (Coronavirus Disease)⁶. Le later contracted the virus while treating an infected patient for acute angle closure glaucoma, became critically ill, and died on Feb 6, 2020^{5,6}.

Materials and Methods

This is a cross-sectional observational study of ocular symptoms in laboratory-confirmed COVID-19 patients who were admitted to isolation wards in Benazir Bhutto Hospital, Rawalpindi (BBH) for a period from Dec 16, 2020, to Jan 15, 2021. The admission criteria included positive RT-PCR on nasopharyngeal and throat swabs, Ground glass haze on chest x-rays, and HRCT in any patient with a history of contact with a confirmed COVID-19 patient or a history of recent travel. Baseline labs and inflammatory markers were done to assess the severity of the disease. Patients were discharged after 2 consecutive negative PCR reports at least 72 hours apart.

A structured form was used to extract the data from electronic medical records. Data collected included sociodemographic characteristics, presenting symptoms, systemic signs and symptoms, ocular symptoms, past medical history, RT-PCR, and chest radiographic findings. The majority of questions were adapted from the Ocular Surface Disease Index (OSDI) and Salisbury Eye Evaluation Questionnaire (SEEQ) that have been used in other COVID-19 studies. Data were collected from a total of 44 patients, the majority of whom were male (30). Data were analyzed using IBM SPSS version 24. Categorical data were described using frequencies and percentages and continuous data were described using means and standard deviation. The Chi-square test was used to compare

percentages. A p-value of less than 0.05 was considered statistically significant.

Results

A total of 44 patients (30 (68.2%) males and 14 (31.82%) females) were admitted to the isolation wards during the study period. The mean age (\pm SD) age was 55.75 ± 14.53 with a median range of 57.50 (14-92). Age <30 years (4.5%), 30-50 (27.3%), and >50 (68.2%) as shown in

Table-1

		Frequency	Percentage
Age	< 30	2	4.5
	30-50	12	27.3
	>50	30	68.2
	Mean (SD)	55.75 \pm 14.53	
	Median (range)	57.50 (14-92)	
Gender	Male	30	68.2
	Female	14	31.2

Ocular symptoms were present in 17 (38.6%) most common being Waterying (94.4) and red eye (33.3) followed by the rest as in Tables 2 and 3.

Table-2

	Frequency	Percentage
Present	17	38.6
Absent	27	61.4

Table-3

Ocular Symptoms n=18

Symptoms	frequency	percentage
Red eye	6	33.33
Waterying irritation	17	94.44
Dry Eyes	2	11.11
blurring of vision	1	5.56
Burning	2	11.11
Grittiness	1	5.56
Itching	1	5.56

Discussion

Since the emergence of COVID-19, various studies the world over are done and still going on for a better understanding of the disease and its associations. The epidemiologic data of ocular associations of COVID-19 to date, range from 0.8 to 0.9%^{7,8}. However, the

accurate ocular association of COVID-19 is still unclear^{9,10,11}. This study that we performed in our Benazir Bhutto hospital, draining the areas of district Rawalpindi, included 44 Covid 19 patients, 30 (68.2) males, and 14 (31.2) females. Among these 2 patients (4.5%) were < 30 years of age, 12 (27.3%) were between 30-50 years and 30 (68.2%) were >50 years of age. Ocular symptoms were found to be present in 17 (38.6%) patients and absent in the rest 27 (61.4%). The most frequent ocular symptoms were a red eye in 6 (33.33%) of patients, Watering in 17 (94.44%), and Irritation in 2 (11.11%). Less common symptoms included Irritation, Dry Eyes, blurring of vision, Burning, Grittiness, and Itching. Our study showed that among our population ocular symptoms with Covid 19 were mild, have no fixed pattern of occurrence and not associated with any serious ocular outcome.

Conclusion

We conclude from our study that Ocular symptoms were present in 17 patients (38.6%) out of 44 (Total number of patients) However, these symptoms were mild, had no fixed pattern of occurrence, neither were associated with the severity of the systemic disease nor associated with any serious ocular outcome.

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