VOLUME - 11, ISSUE - 02, FEBRUARY - 2022 • PRINT ISSN No. 2277 - 8160 • DOI : 10.36106/gjra

Original Research Paper

Otorhinolaryngology

OPHTHALMIC AND OTORHINOLARYNGOLOGY FINDINGS IN COVID-19 RECOVERED PATIENTS IN NORTH INDIA

Dr. Ashish sawhney* Post Graduate, SMGS Hospital and GMC Jammu. *Corresponding Author

Dr. Rohini Choudhary Senior Resident, Government Medical College (GMC), Jammu.

ABSTRACT

Background- Many patients suffered from covid-19 and the infection varied in presentation from mild to life threatening complications. Many of them also presented with delayed manifestations after recovery. Among such cases, many patients presented with ophthalmic and ENT (ear, nose and throat) findings which are important for treating physician as it can have long term implications on the population.

Aim - To evaluate ophthalmic and ENT manifestations in patients after recovery from Covid-19.

Material and Method- The study included 106 patients who presented in Eye and ENT out-patient department after recovering from covid-19 but now presenting with ophthalmic and ENT findings that were not present earlier. Data was analyzed and interpreted as number, percentages and mean.

Conclusion- even after recovering from covid-19 infection, many patients reported different ophthalmic and ENT manifestations which may or may not be related to Covid -19 but were developed in patients after acquiring Covid infection. Definite association of Covid with such late manifestations needs even larger number of people.

KEYWORDS : Covid-19 recovered, Ophthalmic, Complications, ENT

INTRODUCTION

Corona virus (SARS CoV-2) pandemic involved almost every country with large morbidity and mortality and caused health implications of unprecedented magnitude.[1] WHO declared this infection caused by SARS-CoV-2 as COVID-19 on February 11,2020[2]. Due to high potential of human to human transmission, spread of COVID-19 occurred globally as pandemic [2]. The infection resulted in mild to severe life threatening complications and affected different organs of the body. Apart from involvement of respiratory system, this virus also affected blood circulation, affected nose, eyes, abdomen, skin etc. This virus has lasting consequences and the full spectrum of diseases it caused is yet not known. The theories on pathogenesis, variable presentations, permanent sequelae to different organs and true association of Corona virus are being reported worldwide and still studies are going on. There are very few studies on association of COVID-19 with ophthalmic and ENT manifestations [3,4] and many studies are still undergoing to determine the association. In this study, we tried to look for health implications that Covid-19 might have posed on the patients who recovered from this infection but now presenting with features that either have persisted from the time of infection or developed after recovering which were not present earlier. Studying such symptoms might help the treating physicians in better understanding of the disease[2] and its long term consequences on health although direct association of Covid with eye and ENT manifestations are not established till yet. Recently, Post-Covid syndrome (PCS) has been proposed owing to high frequency of people affected by the virus having persistent symptoms even after recovery from disease's acute phase[5,6]. Symptoms when persist beyond 3 weeks after their first appearance have been defined as PCS by Greenhalgh et al [7] and when extends beyond 12 weeks as chronic Covid-19.

MATERIAL AND METHOD

This study was conducted on 76 patients who presented in Eye and ENT out-patient department after recovering from Covid-19 with ocular, ear, nose or throat symptoms. The study was conducted after due approval from institutional ethical committee and patients were explained about the nature of study and were included after their consent.

Inclusion Criteria:

Any age, both genders, patients with history of covid-19 infection but now recovered and presently RT-PCR negative. The patients recovered from active infection but either had persistent symptoms that developed during the infection or developed new symptoms later on after some time has elapsed from recovering from the infection.

Exclusion Criteria:

Patients with active covid-19 infection, patients with ocular and ENT findings that was present before acquiring Covid, patients with any other systemic disease, patients on any systemic medications.

Detailed Ocular and Oto-rhino-laryngological examination of such patients was done including refraction, slit lamp examination, fundus examination, schirmer test, color vision, rhinoscopy, otoscopy and oral examination. Hearing, taste and smell sensations were also tested. The duration of signs and symptoms, persistent or newly developed were noted and patients were given symptomatic treatment. Data regarding clinical and drug history, recovery duration lifestyle modifications and vaccination status was also collected. The data collected was tabulated and represented in the form of numbers, percentages and mean.

RESULTS

The study included 76 patients, out of which, 38 patients presented with ENT symptoms, 32 patients presented with ocular symptoms and 6 patients had both ocular and ENT symptoms. Out of these 76 patients, 54 were males and 22 were females. The minimum age of presentation was 28 years and maximum was 64 years with mean age of 44.64 ± 7.41 years. The age and gender characteristic of patients is given in table 1.

Table 1: Demographic characteristics of patients.

Age range	Males (number)	Females (number)
20-40 years	22	7
41-60 years	27	11
61-80 years	5	4
Total	54	22

Majority of the patients were vaccinated at the time of presentation in our OPD as shown in Figure 1.

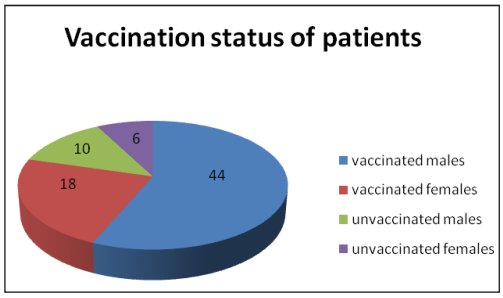

Figure 1: Vaccination status of Covid recovered patients.

The patients with ear, nose or throat symptoms presented with variable symptoms like nasal congestion, anosmia, dysguesia and pharyngeal erythema. The patients with ocular complaints on examination were observed to have dry eye, eye ache, venous occlusion, ptosis, watering and CSCR (central serous chorioretinopathy). The mean time of presentation after the development of first symptom was 94±28.6 days. These findings according to their frequency are depicted in table 2.

Table 2: Ocular and ENT findings in Covid recovered patients

Ocular Findings	Number of patients		Percentage (%)
	Persistent symptoms	New symptoms	
Dry eyes	2	8	31.25%
Eye ache	2	2	12.5%
Watering	5	3	25.0 %
Venous occlusion	3	0	9.37%
Ptosis	2	0	6.25%
CSCR	2	3	15.63%
Total	16	16	100%
ENT Findings			
Nasal congestion	4	1	13.16%
Anosmia/ hyposmia	11	9	52.63%
Dysguesia/ loss of taste	5	3	21.05%
Pharyngeal erythema	2	3	13.16%
Total	22	16	100%
Both ocular and ENT findings			
Watering and nasal congestion	1	3	66.67%
Eye ache and pharyngeal erythema	1	1	33.33%

(includes both persistent symptoms; that remained for more than 1 month even after recovery and new symptoms that developed after recovery)

DISCUSSION

This study evaluated the ocular and ENT findings in patients who recovered from COVID-19 with a mean time of 94.4±28.6 days after the onset of disease's first symptoms. The mean age of presentation was 44.64 ± 7.41 years with range of 28 to 64 years of age. Out of these 76 patients, 54 (71.05%) were males and 22 (28.95%) were females. The most common ocular finding was dry eyes in our study (31.25%). A study by Costa IF et al.[8] also showed high prevalence of dry eye in their patients, especially in women (38.7%), which was considered high due to more advanced age of female patients (54.2 ± 14.7 years) in that sample. The higher frequency of dry eyes in such cases needs more studies to clarify due to a small number of patients in our study. Other ocular findings were watering, eye ache, ptosis, venous occlusion and CSCR. Some of these findings were present during Covid and were present for more than one month even after recovery. Whereas, some patients complained of new development of symptoms like watering or blurred vision (which on examination showed venous occlusion) and ptosis. Ptosis was mostly observed in patients with history of orbital cellulitis or fungal sinusitis during active Covid infection. The mean time of presentation was 94.4 days in our study. In another study by Carfi et al., patients were assessed after a mean of 60.3±13.6 days after onset of the first COVID-19 symptom and at the time of evaluation, only 18 (12.6%) were completely free of any COVID-19 related symptom, while 32% had 1 or 2 symptoms and 55% had 3 or more[9]. The most frequently observed ENT finding was anosmia/hyposmia which was complained by 52.63% patients. Some patients (5) presented with persistent anosmia even after 1 year of recovery from Covid. Webster et al[10,11]., performed study to look for interventions in cases with persistent olfactory dysfunction after Covid. Many studies have shown long term persistent symptoms in Covid recovered patients[12,13]. Other patients presented with altered taste/loss of tatse, nasal congestion and pharyngeal erythema. Some of the patients had both ocular and ENT findings (6 patients). Many other covid recovered patients presented to our OPD with raised intra-ocular pressure and diabetic retinopathy changes, but were not included in our study as it could be due to prolonged use of steroids for treatment and not due to Covid infection itself and many studies have shown it[14,15].

CONCLUSION

All these findings can be valuable for treating clinicians in identifying long term consequences of Covid-19 and its sequelae. Patients can be managed better and certain preventive measures can be adopted while treating Covid patients like rational use of drugs to prevent such post-Covid complications and its implications on general health of large number of population.

REFERENCES

1. Sen M, Honavar SG, Sharma N, Sachdev MS. COVID-19 and eye: A review of ophthalmic manifestations of COVID-19. Indian J Ophthalmol. 2021;69(3):488-509.
2. Guo YR, Cao QD, Hong ZS, Tan YY, Chen SD, Jin HJ. The origin, transmission and clinical therapies on coronavirus disease 2019(COVID-19) outbreak- an update on the status. Mil Med Res. 2020;7:11.
3. Wu P, Duan F, Luo C, Liu Q, Qu X, Liang L et al. Characteristics of ocular findings of patients with Coronavirus disease 2019(COVID-19) in Hubei Province, China. JAMA Ophthalmol. 2020;138(5):575-78.
4. El-Anwar MW, Elzayat S, Fouad YA. ENT manifestation in COVID-19 patients. Auris Nasus Larynx. 2020;47:559-64.
5. World Health Organization. Global COVID-19 Clinical Platform Case Report Form (CRF) for Post COVID condition (Post COVID19 CRF).
6. Nalbandian A, Sehgal K, Gupta A, Madhavan MV, McGroder C, Stevens JS et al. Post-acute COVID-19 syndrome. Nat Med. 2021;27(4):601-615.
7. Greenhalgh T, Knight M, A'Court C, Buxton M, Husain L. Management of post-acute covid-19 in primary care. BMJ. 2020;11;370:3026.
8. Costa IF, Bonifácio LP, Bellissimo-Rodrigues F, Rocha EM, Jorge R, Bollela VR et al. Ocular findings among patients surviving COVID-19. Sci Rep. 2021;26;11(1):11085.
9. Carfì A, Bernabei R, Landi F; Gemelli Against COVID-19 Post-Acute Care Study Group. Persistent Symptoms in Patients after Acute COVID-19. JAMA. 2020;11:324(6):603-605.
10. Webster KE, O'Byrne L, MacKeith S, Philpott C, Hopkins C, Burton MJ. Interventions for the prevention of persistent post-COVID-19 olfactory dysfunction. Cochrane Database Syst Rev. 2021;7(7):CD013877.
11. O'Byrne L, Webster KE, MacKeith S, Philpott C, Hopkins C, Burton MJ. Interventions for the treatment of persistent post-COVID-19 olfactory dysfunction. Cochrane Database Syst Rev. 2021;7(7):CD013876.
12. Nguyen NN, Hoang VT, Dao TL, Dudouet P, Eldin C, Gautret P. Clinical patterns of somatic symptoms in patients suffering from post-acute long COVID: a systematic review. Eur J Clin Microbiol Infect Dis. 2022:10.
13. Boix V, Merino E. Post-COVID syndrome. The never ending challenge. Med Clin (Engl Ed). 2022:31.
14. Roberti G, Oddone F, Agnifili L, Katsanos A, Michelessi M, Mastropasqua L et al. Steroid-induced glaucoma: Epidemiology, pathophysiology, and clinical management. Surv Ophthalmol. 2020;65(4):458-472.
15. Yau JW, Rogers SL, Kawasaki R, Lamoureux EL, Kowalski JW, Bek T et al. Meta-Analysis for Eye Disease (META-EYE) Study Group. Global prevalence and major risk factors of diabetic retinopathy. Diabetes Care. 2012;35(3):556-64.