

ENT MANIFESTATIONS IN PATIENTS, POST COVID-19 INFECTION

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ABSTRACT

INTRODUCTION

Facial nerve paralysis is a rare but serious complication associated with chronic otitis media (COM). While the use of antibiotics has reduced its occurrence, preventing this complication remains a challenge.

CASE REPORT

We present the case of an 11-year old boy diagnosed with chronic suppurative otitis media, who was admitted to the ENT Department with bilateral ear discharge with decreased hearing which was gradual in onset and progressive in nature, associated with right-sided facial nerve paralysis. The patient's facial nerve paralysis was scored as IV, according to the House-Brackmann scale. A cranio-facial computer tomography examination revealed mastoid cavity opacification, mucosal hypertrophy, and signs of chronic osteitis, with soft tissue accumulation over middle ear cavity. There was focal dehiscence of lateral wall of facial canal. The patient underwent Modified Radical Mastoidectomy with Ossicular reconstruction and tympanoplasty to verify the presence of a cholesteatoma, and to remove the offending lesions. Post-operatively, patient's recovery was favorable, and prognosis remained encouraging. The patient's evolution was

followed by check-ups every three months to assess progress and benefits of the treatment.

CONCLUSION

Bell's palsy in the context of squamous CSOM presents a unique clinical challenge due to the risk of permanent facial nerve damage if not treated promptly. Various studies highlight the importance of early diagnosis and early intervention which is different in the two categories.

KEYWORDS

Covid-19, ENT Manifestations, Odynophagia, Serous otitis media, nasal obstruction, hoarseness.

INTRODUCTION

At the end of 2019 in Wuhan, a large city in the Hubei Province of China, a novel coronavirus, Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), was considered as the cause of a number of lower respiratory tract infections. On February 11, 2020, the new disease caused by the SARS-CoV-2 virus was officially termed "COVID 19" by WHO [1]. The COVID-19 is part of the species of the SARS-related corona viruses that have led to previous epidemics over the last two decades as SARS-CoV in 2002–2003 in China and the

Middle East Respiratory Syndrome (MERS-CoV) in 2012–2013 in Saudi Arabia [2].

Many patients experience new, recurring or ongoing symptoms related to COVID-19 several weeks after the acute phase of infection. Post COVID conditions are characterized by a lack of return to a usual state of health following acute COVID-19 infection. The mechanism of post-COVID condition is not well understood but is hypothesized to be secondary to virus-specific pathophysiological changes, prolonged inflammatory response to the acute infection and sequelae of post-intensive care illness.

Long term COVID symptoms can affect any organ system in the body with ear, nose and throat being no exception. Many patients experience various ENT symptoms like loss of taste and smell, Hearing impairment, vertigo, dizziness, breathlessness and so on.

The present study focuses on ENT manifestations in post COVID-19 patients. ENT practitioner should have the knowledge that COVID, even after several months of acute infection can presents as various manifestations which otherwise can be caused by other reasons. So the treatment of the diseased should be advised by keeping the aspect of COVID in mind. This can save the time of the doctor as well as the patient. Thus understanding these symptoms is important for early diagnosis and treatment to improve the prognosis.

MATERIAL AND METHODS

A cross sectional study included 150 patients who had recovered from COVID-19 infection and had presented with ENT symptoms in out patient department of our tertiary care centre

from March 2021 to December 2022. The study protocol was approved by the Ethics committee. Informed consent was obtained from all subjects.

Inclusion criteria

- Patients giving consent for the study
- Patients infected by COVID-19 and confirmed by RTPCR test.

Exclusion criteria

- Patients having past history of surgery of oral or nasal cavities.
- Patients having history of allergic rhinitis or chronic rhinosinusitis.
- Detailed history, physical examination and thorough Ear, nose and throat examination was performed on all patients. All the necessary investigations were done for the patients and were treated accordingly.

STATISTICAL ANALYSIS

The data collected was entered in Microsoft excel and analysed. Analyzed data was presented in the form of frequency and percentage shown by pie and bar chart.

RESULTS

- A total of 150 patients including 78.6% males and 21.3 % females were enrolled in the study.
- The mean age of the patients was 36.7±8.5 years (range, 18–65 years).
- Majority of the patients were in the age group of 20–39 years as depicted in Table 1 and Fig 1

Age group	No. of patients		Total	Percentage
	Male	Female		
<20	18	2	20	13.33%
20-39	47	10	57	38%
40-59	28	14	42	28%
>60	25	6	31	20.66%

Table 1. Demographic details of patients

Majority of the patients had throat related complaints followed by nasal and ear complaints. Out of 150 patients, 44.7% of the patients had throat disorders, 38.65% had nasal and 16.7% had ear related disorders. Various ENT complaints are depicted in Table 2. The most common post COVID ENT symptom was painful swallowing or odynophagia seen in 20% of the patients. Sore throat or sensation of discomfort was also commonly described complaint in 8% of the patients. 5 patients reported shortness of breath with activity.

Reduced smell sensation and taste were the next reported symptoms. Alteration in smell was present in 12 patients (8%) and alteration in taste was present in 8 patients (5.33%). Change in voice was reported in 8 patients. Flexible laryngoscopy examination was performed in 8 patients out of which 4 patients showed laryngeal oedema and 3 patients had features of laryngitis. Idiopathic Unilateral vocal cord paresis was found in 1 patient.

Among Otological manifestations, serous otitis media was found in 12 patients (8%). Hearing loss was present in 6 patients. Pure tone audiogram was carried out and frequencies from 250 Hz to 8 KHz were tested. Results showed mild low frequency conductive hearing

loss in 2 patients and sensorineural hearing loss in 4 patients involving higher frequencies. Tinnitus was reported in 4 patients. 3 patients had bilateral tinnitus with high pitched buzzing sound and 1 patient had unilateral tinnitus associated with mild hearing loss. Patient was further investigated and MRI brain was performed to rule out central cause of hearing loss. Epistaxis was present in 2 patients post recovery and had history of oxygen supplementation. Diagnostic nasal endoscopy was performed in these patients which showed inflamed and congested nasal mucosa in both the patient. 20 patients had post nasal discharge and complained of persistent cough.

Disorders	No. of patients	Percentage
Serous otitis media	12	8%
Hearing loss	6	4%
Ringing sensation	4	2.7%
Vertigo	3	2%
Nasal obstruction	26	17.3%
Post nasal discharge	20	13.3%
Epistaxis	2	1.33%
Acute pharyngitis	12	8%
Odynophagia	30	20%
Hoarseness	8	5.33%
Smell and taste alteration	20	13.33%
Dyspnoea	5	3.33%
Dysphagia	-	
Contact hawking sensations	2	1.33

Table 2. Various ENT complaints

In our study of 150 patients, 44.7% of the patients had throat disorders, 38.65% had nasal and 16.7% had ear disorders, clearly indicating that after COVID infection, the most commonly affected organ is throat with main complaint of odynophagia. Then nasal symptoms come and at last ear manifestations occur.

DISCUSSION

In December 2019, a novel corona virus (CoV) epidemic, caused by the severe acute respiratory syndrome corona virus – 2 (SARS-CoV-2) emerged from China . On February 11, 2020, the WHO pronounced the disease produced by this new virus as COVID-19. The widespread distribution and infectivity of COVID-19 make it an important pathogen with an unrestricted health threat. The nasal, nasopharyngeal and/or the oropharyngeal tissue are among the main harbor sites of the infection, main site of taking the sample for testing and a main source of transmission of infection.

While, the literature on post Covid ENT manifestation is still sparse, thus, there is value in studying ENT manifestations of such novel virus and there is a need to identify the defining ENT epidemiological and clinical characteristics with more precision [2].

In our study out of 150 patients, 44.7% of the patients had throat disorders, 38.65% had nasal and 16.7% had ear related disorders. Srivastava A et al., 2022, Borah H et al., 2021, El-Anwar MW et al., 2020, also reported similar findings. There are studies which are against our findings eg. Wang et al., 2020.

Among throat disorders, most common post COVID ENT symptom was painful swallowing

or odynophagia seen in 20% of the patients. Sore throat or sensation of discomfort was also commonly described complaint in 8% of the patients and 3.33% of patients reported shortness of breath with activity. Change in voice was reported in 8 patients. Similar findings were found in Srivastava A et al., 2022, Borah H et al., 2021 with most common odynophagia as throat manifestations.

In nasal symptoms, nasal obstruction was the second most common reported symptoms with percentage of 17.3% . Alteration in smell was present in 12 patients (8%) and alteration in taste was present in 8 patients (5.33%), making total of (13.33%). 20 patients (13.33%) had post nasal discharge and complained of persistent cough. Epistaxis was present in 2 patients (1%) post recovery. Srivastava A et al., 2022, Borah H et al., 2021, El-Anwar MW et al., Young et al. 2020 also shows nasal obstruction and alteration of smell is most common symptoms among patients presenting in OPD.

Among otological manifestations, serous otitis media was found in 12 patients (8%). Hearing loss was present in 6 patients (4%). Tinnitus was reported in 4 patients making 2.7% of total patients. Similar findings were there in, Borah H et al., 2021 also shows similar results however study of Wang et al., 2020 differs from our results, who in their study showed SNHL as most common ear finding.

The present study is beneficial to physician and ENT specialists as it will decrease the time in diagnosing the disease and helps in early treatment of the patient. This will also increase the compliance of patient.

CONCLUSION

Knowledge of the ENT manifestations of post COVID-19 is essential for its early identification and to devise appropriate prevention protocols for the benefit of the general population. Symptomatic treatment was found to be effective in most of the cases. However, further evaluation of the recovered patients also needs to be done for the late sequels of the disease.

DECLARATIONS

Ethics approval and consent to participate: No ethical approval is required

Author's contribution: All the authors contributed to the study conception and design.

Competing interests: The authors declare that they have no competing interests

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REFERENCES

1. Krajewska J, Krajewski W, Zub K. et al., 2020 COVID-19 in otolaryngologist practice: a review of current knowledge. *European Archives of Otorhinolaryngology* 2020;1885-1897.
2. El-Anwar et al-2020 ENT Manifestations in COVID-19 patients. *Auris Nasus Larynx*; 2020 Aug 47(4): 559-564.
3. Srivastava A, Agarwal AC, Alam SZ et al., 2022 ENT Manifestations in Patients suffering from COVID-19 : Study from a COVID hospital in North India. *Int Arch Otorhinolaryngology*; 2022 Jan 26(1) : 148-e151
4. Borah H, et al., 2021 Otorhinolaryngological Manifestations and its Management in COVID-19 Patients. *Indian Journal of Otolaryngology and Head and Neck Surgery*; 2022 : 74, 3391-3394 (2022)
5. Al-Swiahb JN, Motiwala MA. Upper respiratory tract and otolaryngological

manifestations of coronavirus disease 2019 (COVID-19): A systemic review. *SAGE Open Medicine*. 2021;9.

6. WHO (2020): General's Opening Remarks at the Media Briefing on COVID19. Available from <https://www.who.int/dg/speeches/detail/who>
7. Wang W, Xu Y, Gao R, et al. Detection of SARS-CoV-2 in Different Types of Clinical Specimens. *JAMA*. 2020;323(18): 1843-1844. doi:10.1001/jama.2020.3786
8. Young BE, et al-Singapore 2019 Novel Coronavirus Outbreak Research Team. Epidemiologic Features and Clinical Course of Patients Infected With SARS-CoV-2 in Singapore. *JAMA*. 2020 Apr 21;323(15):1488-1494.

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