



## ENT Manifestations in COVID 19 Patients

Zeeshan Ahmad<sup>1</sup>, Umar Shah<sup>2</sup>

Zeeshan Ahmad, Junior resident, Department of ENT, GMC Srinagar

Umar Shah, Assistant professor, Department of ENT, GMC Srinagar

### Abstract

**Aim:** To study the ENT manifestations in the patients diagnosed with covid-19.

**Material and methods:** This is a prospective study in patients admitted in the wards of Government medical College, Srinagar between February 2020 and July 2020. There were (56) symptomatic patients out of (145) patients diagnosed with covid-19.

**Result:** Among ENT manifestations throat symptoms were found most common including loss of taste in (15) patients, most of them were reversible after 2-3 weeks. Among nasal symptoms nasal congestion was found most common (30), followed by loss of smell (20), followed by nasal blockage and runny nose. Ear symptoms were not so commonly found.

**Conclusion:** This study represents the initial findings of all individuals with ENT manifestations in the symptomatic confirmed covid-19 patients.

Received 14 November, 2021; Revised: 27 November, 2021; Accepted 29 November, 2021 © The author(s) 2021. Published with open access at [www.questjournals.org](http://www.questjournals.org)

### I. INTRODUCTION

Coronaviruses are a group of RNA related viruses that cause diseases in mammals and birds. In humans, these viruses cause respiratory tract infections that can range from mild to lethal. Mild illnesses include some cases of the common cold (which is also caused by other viruses, predominantly rhinoviruses), while more lethal varieties can cause SARS, MERS, and COVID-19. They are enveloped viruses with a positive-sense [1-3] single-stranded RNA genome and a nucleocapsid of helical symmetry[7,9,10]. The genome size of coronaviruses ranges from approximately 26 to 32 kilobases, one of the largest among RNA viruses[8,9]. They have characteristic club-shaped spikes that project from their surface, which in electron micrographs create an image reminiscent of the solar corona, from which their name derives [4-6]. The coronavirus surface spikes are homotrimers of the S protein, which is composed of an S1 and S2 subunit. The homotrimeric S protein is a class I fusion protein which mediates the receptor binding and membrane fusion between the virus and host cell. The S1 subunit forms the head of the spike and has the receptor binding domain (RBD). The S2 subunit forms the stem which anchors the spike in the viral envelope and on protease activation enables fusion. The E and M protein are important in forming the viral envelope and maintaining its structural shape. Transmission Infected carriers are able to shed viruses into the environment. The interaction of the coronavirus spike protein with its complementary cell receptor is central in determining the tissue tropism, infectivity, and species range of the released virus. Coronaviruses mainly target epithelial cells[5]. They are transmitted from one host to another host, depending on the coronavirus species, by either an aerosol, fomite, or faecal-oral route. The incubation time for COVID-19 since the exposure to SARS-CoV-2 is believed to reach 14 days, nevertheless, the majority of patients develop COVID-19 disease after 4–5 days (range between 2 and 7 days) after being infected[4,5]. COVID-19 remains contagious even during the latency period, thus patients before clinical COVID-19 presentation can transfer the virus to others[10].

### Infection in humans

In December 2019, a pneumonia outbreak was reported in Wuhan, China. On 31 December 2019, the outbreak was traced to a novel strain of coronavirus, which was given the interim name 2019-nCoV by the World Health Organization (WHO), later renamed SARS CoV-2 by the International Committee on Taxonomy of Viruses. As of 31 July 2020, there have been at least 675,545 confirmed deaths and more than 17,406,644 confirmed cases in the COVID-19 pandemic worldwide and at least 35,745 deaths and more than 1,638,827 confirmed cases of COVID-19 In India[1-3].

## Aim

The aim of study is to see ENT manifestations in covid-19 affected patients admitted in the wards of GMC SRINAGAR since 1/2/2020 till 31/7/2020.

**Sampling technique:** Total enumeration.

**Inclusion criteria:** All symptomatic covid-19 affected patients admitted in wards of GMC SRINAGAR.

**Exclusion criteria:** Patients or guardian refusal for consent.

## II. RESULTS

From 01/02/2020 till 31/07/2020, a total of 76 respondents met inclusion. Which were COVID-19 positive symptomatic patients by testing or diagnosis by a health care practitioner in GMC, SRINAGAR. Although most respondents experienced other major COVID-19-related symptoms during or after their chemosensory change. Among ENT manifestations throat symptoms were found most common including loss of taste in 15 patients. It was noticed that most commonly sweet and salt goes first then sour taste vanish and bitter and chilli taste goes in the end, most of them were reversible after 2-3 weeks. Among nasal symptoms nasal congestion was found most common (30) followed by loss of smell (20), followed by nasal blockage & runny nose. loss of smell was also reversible in most of the cases after 2-3 weeks. Ear symptoms were not so commonly found. Although itching in bilateral ear, sensation of ear fullness, ear ache and conductive hearing loss were complained by some patients.

## III. DISCUSSION

To date, preliminary work has demonstrated a high incidence of otorhinolaryngological changes along with smell or taste change in patients with COVID-19. However, the wide variation in populations have been studied. Irrespective, chemosensory changes associated with COVID-19 are well established, leading most health organizations worldwide to include acute changes in smell or taste among symptoms suggestive of COVID-19. Despite, many patients with new-onset chemosensory deficits are still not suspected of COVID-19 infection or tested as such. Reasons for lack of testing are likely several and may owe largely to limited availability as well as a lack of understanding in the lay and medical communities of the association between smell/taste and COVID-19[1]. Among all respondents experiencing olfactory disturbances in our study, 8.4% cited chemosensory disturbances as their first or only symptom of disease. This is consistent with 8.4% of hospitalized patients with COVID-19 reporting smell or taste disturbances as the initial presenting symptom but substantially higher than other reports based on patient populations with presumably milder disease. The co-occurrence of multiple well-known symptoms of COVID-19 suggests that many of these respondents were undiagnosed COVID-19 infections. Some confirmed covid-19 Patients also presented with subjective discomfort in the bilateral ears and bilateral mild conductive hearing loss[10].

## IV. CONCLUSION

This study represents the initial findings of a longitudinal survey of all individuals with ENT manifestations along with the chemosensory loss in the symptomatic confirmed covid-19 patients admitted in the wards of GMC ,SRINAGAR during the COVID-19 pandemic. Patients may present with smell or taste loss before other symptoms and experience complete subjective loss of smell or taste. During the ongoing COVID-19 pandemic, changes in smell or taste are not being considered indicative of possible COVID-19 infection especially in the absence of other high-suspicion symptoms.

## REFERENCES

- [1]. Coelho DH, Kons ZA, Costanzo RM, Reiter ER. Subjective Changes in Smell and Taste During the COVID-19 Pandemic: A National Survey- Preliminary Results. *Otolaryngol Head Neck Surg.* 2020 ;163(2):302-306.
- [2]. Korea Times. 15% of COVID-19 patients lose sense of smell or taste: data. Accessed April 25, 2020. [https://www.koreatimes.co.kr/www/nation/2020/03/119\\_286790.html](https://www.koreatimes.co.kr/www/nation/2020/03/119_286790.html)
- [3]. Chan KW, Wong VT, Tang SCW. COVID-19: An Update on the Epidemiological, Clinical, Preventive and Therapeutic Evidence and Guidelines of Integrative Chinese–Western Medicine for the Management of 2019 Novel Coronavirus Disease. *The American Journal of Chinese Medicine* 2020:1-26.
- [4]. Perlman S, Evans G, Afifi A. Effect of olfactory bulb ablation on spread of a neurotropic coronavirus into the mouse brain. *The Journal of experimental medicine* 1990;172: 1127-32.
- [5]. Tong JY, Wong A, Zhu D, Fastenberg JH, Tham T. The Prevalence of Olfactory and Gustatory Dysfunction in COVID-19 Patients: A Systematic Review and Meta-analysis. *Otolaryngol Head Neck Surg.* 2020;163(1):3-11.
- [6]. Suzuki M, Saito K, Min WP, et al. Identification of viruses in patients with postviral olfactory dysfunction. *The Laryngoscope* 2007;117:272-7.
- [7]. Villalba NL, Mauouche Y, Ortiz MBA, et al. Anosmia and dysgeusia in the absence of other respiratory diseases: should COVID-19 infection be considered? *Eur J Case Rep Intern Med.* 2020; 7(4):001641.
- [8]. Harris PA, Taylor R, Thielke R, Payne J, Gonzalez N, Conde JG. Research electronic data capture (REDCap)—a metadata driven methodology and workflow process for providing translational research informatics support. *J Biomed Inform.* 2009; 42(2):377-381.

- [9]. Harris PA, Taylor R, Minor BL, et al. The REDCap consortium: building an international community of software platform partners. *J Biomed Inform.* 2019;95:103208.
- [10]. Chen T, Wu D, Chen H, et al. Clinical characteristics of 113 deceased patients with coronavirus disease 2019: retrospective study. *BMJ* 2020; 368: m1091.13.