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Original Research Article

How a COVID-19 positive patient can present to an otolaryngologist, a variable presentation: what not to miss?

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ABSTRACT

Background: COVID-19 has led to the global pandemic which started in Wuhan, in China. It is highly contagious and the presenting symptoms may not alarm the patient or the doctor and can be confused with allergies and other simple viral respiratory tract infections in mild cases. Aim of this study was to evaluate the various presentations of COVID-19 patients in department of otorhinolaryngology.
Methods: This study was done during pandemic, from March 2020 to May 2020 for a period of 3 months in government medical college Srinagar. If the patient had any significant travel or contact with the known or suspected COVID-19 positive patient and the various ENT symptoms with which COVID positive patients presented, to the department were evaluated.
Results: Majority of patients were males between the age group of 21 to 40 years. The most common symptoms encountered was cough and fever followed by sore throat and rhinitis. One patient also presented with subacute thyroiditis and two others as neck abscess. Two patients presented with sudden sensorineural hearing loss.
Conclusions: Patients in the department can present with mild respiratory tract infection or also with some peculiar symptoms of subacute thyroiditis or abcess. So, careful history is the key to recognize these patients. And it is highly recommended that doctors during addressing the patients should be in proper protective kits to avoid contracting the disease.

Keywords: COVID-19, Pandemic, ENT

INTRODUCTION

Coronavirus disease 2019 (COVID-19) is an infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).] It was first identified in December 2019 in Wuhan, China, and since spread globally, resulting in an ongoing pandemic.[1] COVID-19 spreads from one person to another when they are in close contact, enough to inhale particles produced by an infected person. The infected person may or may not be symptomatic. This is the cause of high transmission rate of this virus. Patients remain infectious for an average period of two weeks. This virus enters the host cell by integrating with the angiotensin converting enzyme-2 via a glycoprotein on its surface called spike. So the virus can affect the organs where this enzyme is highest in concentration like lungs.[2,3] Real time polymerase chain reaction is used for the diagnosis. Molecular examination is performed by obtaining the samples mainly from respiratory tract. Nasopharyngeal swabs, oropharyngeal swabs, bronchoalveolar lavage, endotracheal aspirates or sputum could be taken for testing.[4] According to present recommendation two negative tests conducted in at least 24-hour interval can exclude COVID-19, though this is not absolute. Sputum can also be analysed but as majority of patient have non productive cough, this is not very

feasible as compared to other samples. Currently there are no laboratory abnormalities that can detect or are specific for COVID-19. Vaccine against SARS-CoV-2 is not available yet and social distancing and preventive majors are recommended to avoid it. Otolaryngologists are at very high risk of SARS-Cov-2 infection as they mostly deal with the upper respiratory tract (URT) which is the main reservoir of SARS-CoV-2. Various procedures done in ENT department can be high risk for transmission of the virus like tracheostomy, bronchoscopy, laryngoscopies, nasal endoscopy and various surgeries. So, it is recommended that all the non urgent surgeries should be postponed. And it should be made sure to wear a proper personal protective kit during emergency procedures like tracheostomy in case intubation is not possible or bronchoscopy for removal of foreign bodies. During tracheostomy cuffed tube is recommended and it is also advisable to suspend mechanical ventilation during incision into the trachea and tracheostomy tube insertion.[5]

Aim of this study was to observe the presenting otorhinolaryngology symptoms in patients who were COVID-19 positive.

METHODS

This cross sectional and retrospective study were done during the COVID-19 pandemic era from March 2020 to May 2020 in government medical college Srinagar. All patients who were admitted in hospital for being COVID-19 positive were studied for various ENT symptoms. A total of 160 symptomatic patients were included in the study. A detailed history of various ENT symptoms, any contact with COVID positive infected or suspected case, history of contact with any person who has been in contact with COVID-19 infected person, any travel history to another state or country, and history of any COVID-19 positive patient in locality of patient was taken. SPSS software was used to analyse the data.

RESULTS

The various ENT symptoms encountered in COVID-19 positive patients were dry cough, fever, sore throat, anosmia, rhinitis, dry cough, ear itching, neck abscess, subacute thyroiditis and sudden sensorineural hearing loss. Out of 160 symptomatic patients, 64 (40%) were females while 96 (60%) were males. And majority (44.3%) of cases belonged to the age group of 21 to 40 years followed by 41 to 60 years (30%). Total number of patients studied were 160. The most common ENT symptom found was dry cough, 86.8% and fever, 76%. 55% of patients gave history of sore throat and50% patients had rhinitis. In our study only 25% of patients had anosmia. 20% of patients also presented with itching ears. Otoscopy in all these patients was normal. Headache was seen in 20% patients. Two patients presented in our department with deep neck space abscess with no other comorbidity. In one patient This was drained in emergency using full personal protective kit. Later this patient came positive for COVID-19 and expired after few days. Another patient presented with retropharyngeal abscess and was treated conservatively. Two other patients presented with sudden sensorineural hearing loss. Another patient came with fever of unknown origin. All base line investigations were done which were normal. USG neck done showed features of thyroiditis. Thyroid function test was also deranged. Patient was COVID positive. Another patient was admitted as a Anaplastic carcinoma thyroid with lung metastasis and underwent tracheostomy. Second COVID-19 test of this patient came out to be positive. Later this patient also expired. Due to multiple pathologies the exact cause of death of this patient remains unknown. All patients underwent base line investigations, X-ray chest. All symptomatic patients were given doxycycline and ivermectin. Dexamethsone is added in case of dysneic patients.

Table 1: Age group of the cases.

Age group (in years)	No. of patients	Percentage
1-20	24	15
21-40	71	44.3
41-60	48	30
>60	17	10.6

Table 2: Symptoms in COVID19 positive cases.

Symptom	No. of patients	Percentage
Dry cough	139	86.8
Fever	122	76.25
Sore throat	88	55
Rhinitis	80	50
Anosmia	40	25
Itching ears	32	20
Headache	32	20
Abscess	2	1.25
Sudden sensorineural hearing loss	2	1.25
Fever-of unknown origin (subacute thyroiditis)	1	0.6

DISCUSSION

On February 11, 2020, the new disease caused by the SARS-CoV-2 virus was officially termed “COVID-19” by WHO. This virus was the cause of epidemic that started in China, and because of the strong person to person transmission it led to the global pandemic. Due to the ongoing pandemic it is important to recognize the various presenting symptoms in different departments. This virus has strong genomic similarity with bats, and because of this reason it is considered that bats have been considered as the natural virus host. This study was done during the COVID-19 pandemic to see the presenting ENT symptoms of COVID-19 patients. A total of 160

symptomatic patients were analyzed. In our study majority of patients were seen to be males. In a study done by Jin et al the number of men was 2.4 times that of women in the deceased patients.[6] While men and women had the same susceptibility, men were more prone to dying. Also, in the same study it was seen that the median age was 62 years (IQR, 51 to 70). Fever (95.3%) and cough (65.1%) were the most common symptoms. Though the susceptibility of the disease in this study is equal in both genders, it is more in males in our study. The reason for this can be that males are more outgoing than females in this part of the world and also smoking is mainly prevalent among males here as compared to females. Also, in a study by Biswas there was increase in the death rate of men but it does not mention about the susceptibility difference among the two genders.[7] As in table 1 it is seen that the majority of patients were in the age group between 21 to 40 years. In a study by David it was seen that the majority of cases were seen in the age group of between 50 to 59 years (10008) followed by 8583 cases in age group of 60 to 69 years and 8579 cases in age group of 40 to 49.[8] This again can be attributed to the fact that this age group ventures out more than the others. According to the review study done by Krajewska, he found that most common otolaryngological symptoms of COVID-19 were cough, sore throat, and dyspnea.[9] Rhinorrhea, nasal congestion and dizziness, hyposmia or anosmia were also present. As in table 2 In our study the most common symptoms encountered were dry cough and fever.20% of patients also presented with headache. None of these patients gave any typical characteristic of headache and had no tender sinuses but at the same time it can't be ignored as one of the presenting symptoms. In our study one COVID positive patient also presented with fever of unknown origin, who was found to have subacute thyroiditis. According to a study by Brancatella they also reported their first case of Subacute thyroiditis after a SARS-CoV-2 infection.[10] Two patients also presented with us as sensorineural hearing loss. According to a study by Mustafa who studied audiograms of 20 COVID-19 positive asymptomatic cases and found high frequency pure-tone thresholds as well as the TEOAE amplitudes were significantly worse in the them and concluded that it could have effect on cochlear hair cell functions.[11]

CONCLUSION

In present day crisis it is important to recognize the symptoms with which patient may present to the department of otolaryngology and act accordingly. Recognizing these cases and addressing them properly is important for curbing its spread in both the medical fraternity and the general population. Many of These cases do not appear as such sick and can easily be confused with allergic symptoms and if not identified and addressed can lead to super spreading of the virus. And it is also highly recommended that doctors during addressing the patients should be in proper protective kits to avoid contracting the disease.

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