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Research Article

Otorhinolaryngology Department during COVID-19 Scenario

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Abstract

Purpose of this article is to give a gross idea that how COVID pandemic has affected the Otorhinolaryngology department in last few months and how we have adopted new practices in ENT OPD. This study consists of general presentation of patients coming to investigator in ENT OPD, detection rate of RAT and RTPCR tests and how we have modified our OPD setup accordingly. Also, we have described about the general measures that were taken during this study period which was from May 2020 to February 2021 in Dr. Vaishampayan Memorial Government Medical College and Ashwini Rural Medical College, Hospital and Research Center, Solapur.

Keywords: COVID-19; URTI; Detection Rate; Anosmia

Introduction

The Coronavirus (SARS-CoV-2) has spread rapidly all across the world since December 2019 after its outbreak from Wuhan city in China [1]. World Health Organization (WHO) finally declared Coronavirus outbreak as a pandemic disease on 11 March 2020. Earlier the spread of disease was supposed to be zoonotic but now it has been proved that the virus spreads by aerosol infection by human-to-human contact [2].

This SARS-CoV-2 mainly affects the respiratory system. The patients come in ENT OPD with chief complaints of common cold, cough, fever, headache, breathlessness, myalgia which goes in favor of COVID during this pandemic era [3]. Otorhinolaryngologist deal with the examination of oral cavity, nasal cavity and airway examination in their OPD, so they are at a much higher risk of getting infected with this SARS-CoV-2 infection as its main modality of spread is through droplet from one infected individual to other [4].

Materials and Methods

We screened out all cases coming to investigator with URTI like complaints in ENT OPD during a 10 months' time period that is from May 2020 to February 2021 (Table 1). This study was conducted jointly by Dr V.M. Govt Medical College and Ashwini Rural Medical College, Hospital and Research Center, Solapur.

Results

560 patients visited ENT department in this study period out of which 400 patients had URTI like symptoms which included cough, sore throat, fever, sneezing, rhinorrhea, myalgia, headache, sore throat, congested nose, runny nose, loss of taste, loss of smell, difficulty in breathing, chest infections which were going in favor of COVID-19. All these symptoms were present in various permutation and combinations (Table 2).

Months	Patients visiting ENT OPD	Patients having URTI like symptoms	Percentage
May 2020	62	44	71.0
June 2020	68	45	66.2
July 2020	50	35	70.0
August 2020	50	38	76.0
September 2020	65	42	64.6
October 2020	60	48	80.0
November 2020	55	41	74.5
December 2020	52	37	71.2
January 2021	56	39	69.6
February 2021	42	31	73.8
Total	560	400	71.4

Table 1: Shows number of patients that visited ENT OPD from May 2020 to February 2021 who had upper respiratory tract infection which goes in favor of COVID.

There was around 70% of URTI like cases which were reported consistently in all the months.

Symptomatology	Number	Percentage
Cough +/- Sore Throat +/- Fever +- Rhinorrhoea/Sneezing	298	74.5
Breathlessness/ difficulty in breathing	28	7.0
Chest infections (pneumonia like symptoms)	62	15.5
loss of smell	8	2.0
Loss of taste	4	1.0

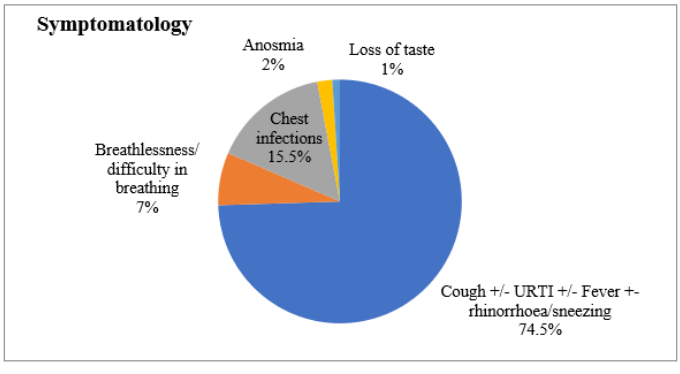

Table 2: Symptomatology and number of patients with percentage who came to ENT OPD with above complaints.

This study includes 400 patients coming to ENT OPD who are symptomatic and are subjected to either RAT/RT-PCR testing or both. Many patients with URTI infection denied the testing because of the fear of COVID and quarantine process which was compulsorily executed during this time period. The patients who denied/ran off from the institution are not included in this study. Also, patients who had other ENT complaints than above are not included in the study. Initially, few patients who came with RAT positive were also subjected to RT-PCR study for the confirmation of the disease. It was observed that, out of 250 RAT test, 170 cases (68%) found to be positive. Further, out of 321 RT-PCT tests, 287 cases (89.4%) confirm of COVID-19 positive (Table 3).

	Positive	Negative	Total
RAT	170 (68%)	80	250
RT-PCR	287 (89.4%)	34	321

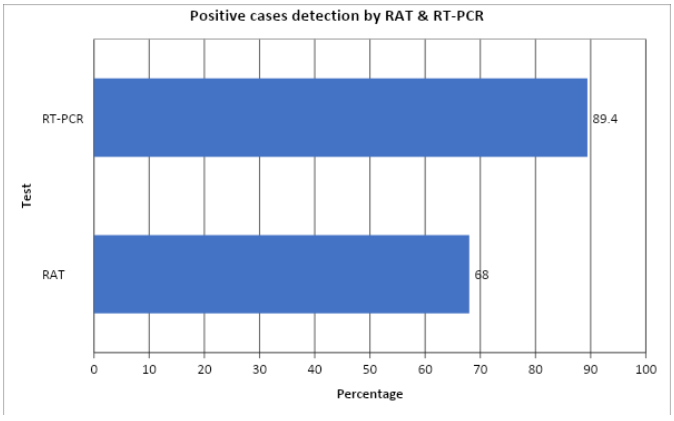

Table 3: Shows the number of patients who were symptomatic and subjected to either RAT/RT-PCR testing.

Once the number of cases of COVID started decreasing patients in whom surgical intervention was needed and indicated were subjected to various surgical procedures (Table 4).

	Total patients visited OPD	Medically managed	Surgical procedure done
December 2020	52	40	12
January 2021	56	37	19
February 2021	42	27	15

Table 4: Shows number of cases subjected to medical treatment and surgical intervention.

Elective surgeries were carried out from December 2020 onwards. Patients subjected to elective surgeries underwent preoperative RT-PCR testing which were negative and emergency surgeries were carried out with RAT negative report. Out of 46 patients who were subjected to surgeries in this 3-month duration, 12 patients came with postop complaints like high grade fever, breathlessness, weakness, fatigue, orbital cellulitis, diarrhea cough, shortness of breath etc. We did routine screening of these 12 patients and also

subjected them to RT-PCR testing again. Out of these 12 patients in whom RT-PCR was done 8 patients came positive. Out of 8 patients who had post-surgical complications 6 of them had comorbidity.

So, we can conclude that despite preoperative COVID screening there remains risk of post-operative patient coming with COVID positive. Asymptomatic patient with negative preop PCR test is uninfected but may turn positive post surgery due to several reasons. Reasons may be that sensitivity and specificity of RTPCR is 90% and can therefore present false negative results in 10% individuals. Also, older individuals can have a longer incubation period and slow detectable viral load [5].

Discussion

PPE and self-care: It was our duty to examine patients but before that we had to take care of ourselves. As an otorhinolaryngologist that was difficult task as we were exposed to aerosols all the time while examining the patient. Modifications that were done in our OPD were:

1. Use of headlight to examine
2. Use of PPE, googles, shields, disposable gloves and N95 mask [6]
3. Use of endoscopes only when emergency and needed
4. Emergencies were taken care of with PPE.

Swab collection: Proper training of residents regarding swab collection from oropharynx and nasopharynx was done by faculty and through webinars given by AIIMS/PGI and such renowned institutes. Doning and doffing was a challenge initially and was taught in proper way [7].

Psychological impact: In OPD we faced problems of convincing patients while subjecting them to RAT/RT-PCT test as many of them were very reluctant to it. Most of them also had fear, feeling of loneliness, anxiety, depression, frustration and boredom to sit at home during the quarantine period [8]. Counselling such kind of patients was a real task.

All cleaning sterilization methods: All possible cleaning methods were used. Hand washing steps of WHO were followed in OPD after examining each and every patient [9]. Surface sterilization were done with 1% sodium hypochlorite solution [10]. Social distancing of patients was followed and wearing mask was compulsory in waiting area.

Other observations in our OPD

Patients who were COVID-19 positive with URTI like symptoms were advised to undergo steam inhalation and salt water gargling by us as an ENT specialist. Those who followed had a good and quick recovery from COVID. We also advised strict hand washing steps and 3 layered masks to all patients as soon as they go home from hospital every time. Breathing exercises was taught to patients who were advised home quarantine. Morale boosting and proper counselling of patients were done by ENT residents. Many patients who came for swab collection vomited as they had very strong gag reflex. In such circumstances all ENT residents and consultants were at highest risk of infection and many of them came positive. So, after then we decided and established a swab booth. (Fig 1) Patients were advised to come empty stomach for swab collection. Patients should stand or sit outside booth and the doctor inside the booth. Both hands of doctor were taken out of booth in the rubber gloves and then swab was collected. This reduced the exposure to a much greater extent. We are practicing this safer method of swab collection since September 2020.

Figure 1: Swab collection booth was established near ENT OPD in our institutes.

Summary

Majority patients coming with URTI like infections (74.5%) were COVID positive and were confirmed with the help of RAT and or RT-PCR testing. Patients coming with URTI like symptom were around 70% in all the months.

Positive case detection rate by RT-PCR testing (89.4%) was higher than RAT testing (68%). So as the time proceeded, we insisted patients to undergo RT-PCR testing only and RAT was used for emergency situations thereafter.

Out of 8 patients who had post-surgical complaints 6 of them had comorbidity and had complications like mucormycosis, ARDS, thromboembolic complications. So, we can say comorbid patients are at a higher risk of having COVID infection [11] and even elective surgeries should be avoided in these comorbid patients in COVID era. These older individuals can have a longer incubation period and slow detectable viral load so COVID report can be negative pre-operatively. Also, surgeon should take all necessary precautions and self care while operating even a COVID negative patient who can be in such incubation period.

Loss of taste (1%) and anosmia (2%) were the least noted symptoms who came to ENT OPD in this duration and these patients turned out to be COVID positive when tested. Though these are least noted symptoms, all the patients with these complaints were COVID-19 positive. So, we can say that anosmia and loss of taste is a good clinical marker to diagnose COVID patients before undergoing RT-PCR testing. These symptoms can be presented alone as well. Out of 8 patients who had anosmia, 6 were having mild to moderated degree anosmia and got recovered after 3-4 weeks post treatment. 2 patients have total anosmia and are on follow-up. Patients who had loss of taste got recovered completely in 4-6 weeks recovery period. So, the loss of taste and smell is the major indicator for COVID and this loss is most of the times temporary which gets reversible [12,13]. We came across only 12 such patients till date.

We are practicing safer methods which would help all consultants, residents, paramedical staff and patients. Our observation was that, the incidence of getting COVID infection was reduced at a greater extend after using swab booth.

Conflict of Interest

The authors declare that there are no conflicts of interest regarding the publication of this article.

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