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The Most Common Otolaryngological Manifestations of Corona Virus Disease 2019

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Abstract

background: The novel Coronavirus disease (covid 19)started in in China at the end of 2019. This new virus, has rapid spread over the world . It became a pandemic respiratory diseaseas as announced by World Health Organization on March, 2020.Otolaryngologicalsymptoms may occur before the development of the symptoms of COVID-19. COVID19 manifestations varyfrom no any symptoms to multiple organs dysfunction.

Aim of the study: to assess the incidence of the commonestear,nose and throat manifestations of COVID 19 positive patients**.**

Method: This study is a prospective in nature,consisted of 100 patients with a positive polymerase chain reaction test for COVID-19 infection, who were managed and followed by otolaryngology specialists in Al-Diwanyah pandemic hospital in Al-Diwanyah city , Iraq, between May and October 2020.They were 50 males and 50 females .the age range from 20-70 years.The inclusion criteria were patients with positive polymerase chain reaction (PCR) test for COVID-19 infection presented with otolaryngological symptoms. Exclusion criteria were physical or mental problems preventing cooperation, use of sedative, anticonvulsant ,or hypnotic drugs , previous history of otolaryngological procedures or surgery ,and history of the nervous system disease.

Results: In our study we found that the most commom otolaryngological manifestations are smell disturbances(86%) and taste disturbances (81%) followed by headache (78%) and sore throat (70%). Most of patients are between 61 and 70 years , and females show more otolaryngological symptoms than males.

Conclusion : otolaryngological manifestations are common and may be presenting feature of COVID -19 patients specially the smell and taste disturbances .Any patient with acute hyposmia,anosmia and parosmia (86%) or hypogeusia,ageusia and dysgusia should considered as COVID-19 suspicion.

Introduction

The novel coronavirus disease 2019 is respiratory infection caused by the coronavirus 2 (SARS-CoV-2) [1-4] . The novel Coronavirus disease (COVID-19) started in in China at the end of 2019[5].This virus, also called Coronavirus Disease 2019 , has worldwide spread . It became a pandemic respiratory diseaseas as announced by World Health Organization on March, 2020[6].Otolaryngological symptoms may occur before the development of the symptoms of COVID-19[7]. The incubation period from exposuretime to the virusis about2 weeks, but, most patients develop the disease from 2 to 7 days [1,8] .COVID-19 stay infectious during period of latency, so,asymptomatic individual can transfer the virus to others .Contact with a patient or a contact with the virus contaminated surfaces with and then contact with oral cavity, nasal cavity, or eyes are infection sources [9] .Oral-fecal spreadcan occur. It was adopted that to avoid infection 2 meters spaceshould be kept between the infected and non-infected individuals[10]. Van Doremalen et al. reported that the virus can remain infectious in droplets for about 3 to72 hour on surfaces, [11]. High temperature, cough and fatigue are the commonest features of the disease[12–14].Shortness of breath, production of sputum, loss of appetite and muscle pain are also found in about one quarter of patients .Throat dyscomfort, headaches, nasal discharge, diarrhea are less common [12] .Cough, dyspnea, nasal obstruction, throat pain, cervical lymph adenopathy or unsteadiness are symptoms that can reported.It was recordedthe disease cancause disturbances of smell and taste[15] . Many countriesrecorded that highpercent of patients had smell disturbance.It also reported that the disease can present with just anosmia without any other manifestations. Those people werea carriers of virus and cause spread of the infection[15] .

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Exclusion criteria were physical or mental problems preventing cooperation, use of sedative, anticonvulsant ,or hypnotic drugs , previous history of otolaryngological procedures or surgery ,and history of the nervous system disease.All patients had a chest computed tomography and blood investigations in form of complete blood count, blood Urea ,serum creatinine, liver function test, Creactive protein, sedimentation rate(ESR), and clotting study.All patients met the eligibility criteria and agreed to participate gave a signed informed consent.

Results

This study consisted of 100 patients with documented COVID-19 infection.They were 50 males and 50 females .The age range from 20-70 years. Table (1) show the age distribution of patients .

Table(1) show the age distribution of the study population.

Age	Male	Female	Total
20-30	3	2	5
31-40	4	8	12
41-50	6	3	9
51-60	5	8	13
61-70	21	40	61
Total	39	61	100

In our study we found that most of patients are between 61 and 70 years , and females show more otolaryngological symptoms than males. Figure (1) show show the age distribution of the study population.

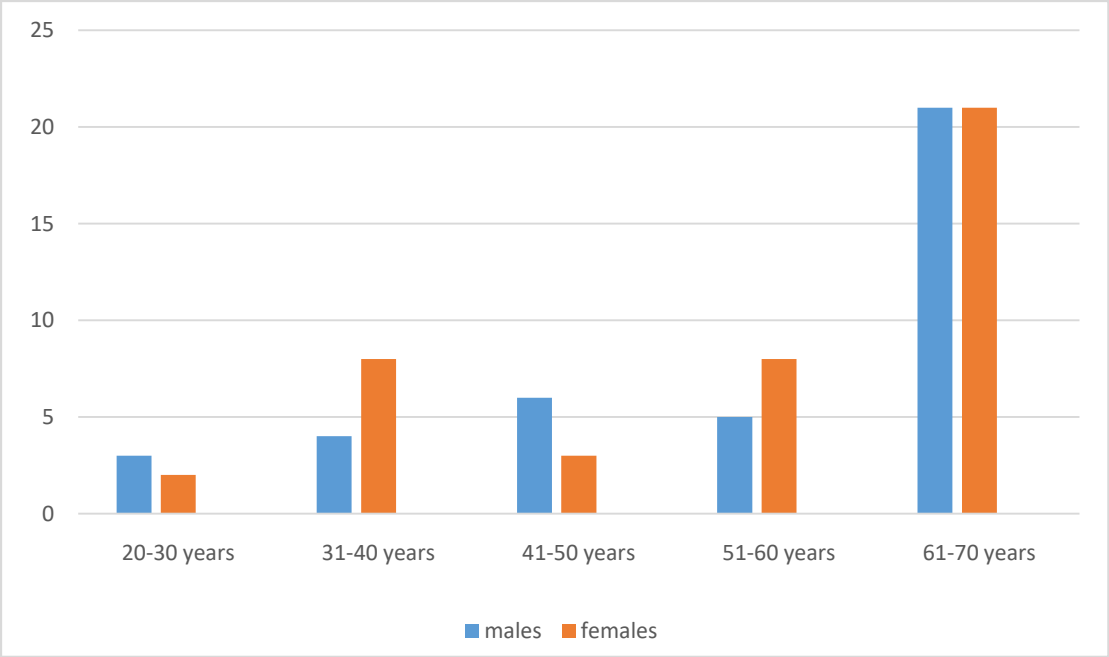

Figure (1) : the age distribution of the study population

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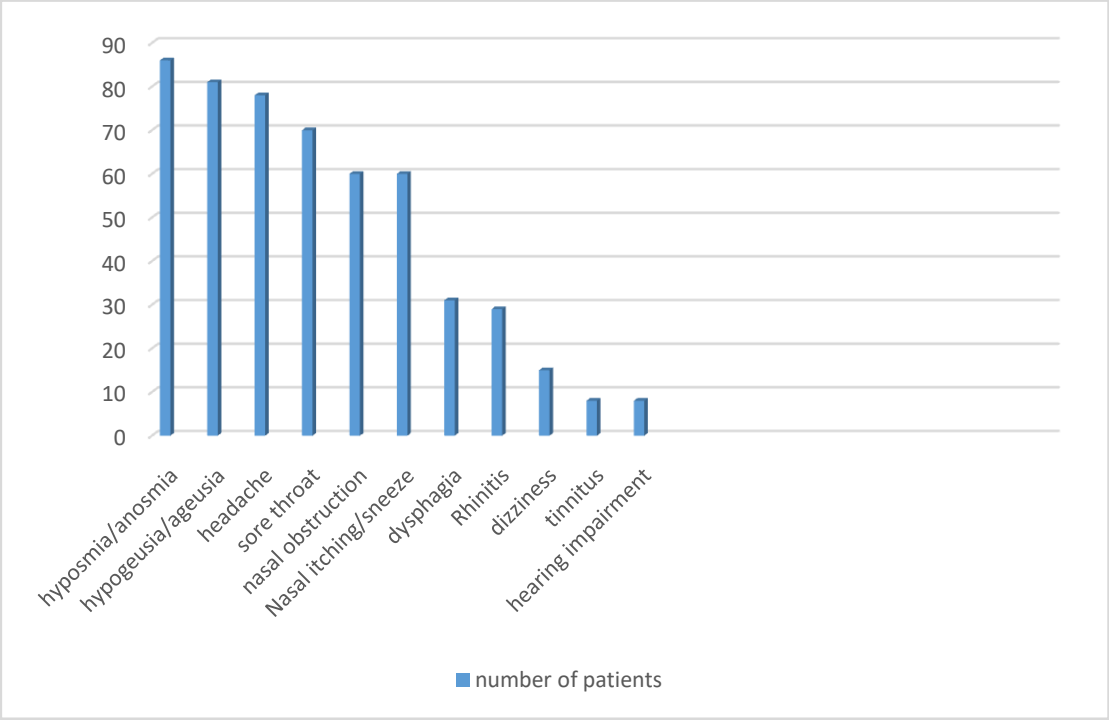
In our study we found that the most commom otolaryngological manifestations are hyposmia,anosmia and parosmia (86%) and hypogeusia,ageusia and dysgusia (81%) followed by headache (78%) and sore throat (70%).Table (2) and Figure (2) shows all the reported otolaryngological manifestations of study population,while Figure (3) show the distribution of these manifestations according to sex.

Table (2) : otolaryngological manifestations of study population**.**

Manifestations	Male	female	total
hyposmia/anosmia	32	54	86
hypogeusia/ageusia	35	46	81
headache	36	42	78
sore throat	29	41	70
nasal obstruction	28	32	60
Nasal itching/sneeze	31	29	60
dysphagia	18	13	31
Rhinitis	13	16	29
dizziness	4	11	15
tinnitus	2	6	8
hearing impairment	7	1	8



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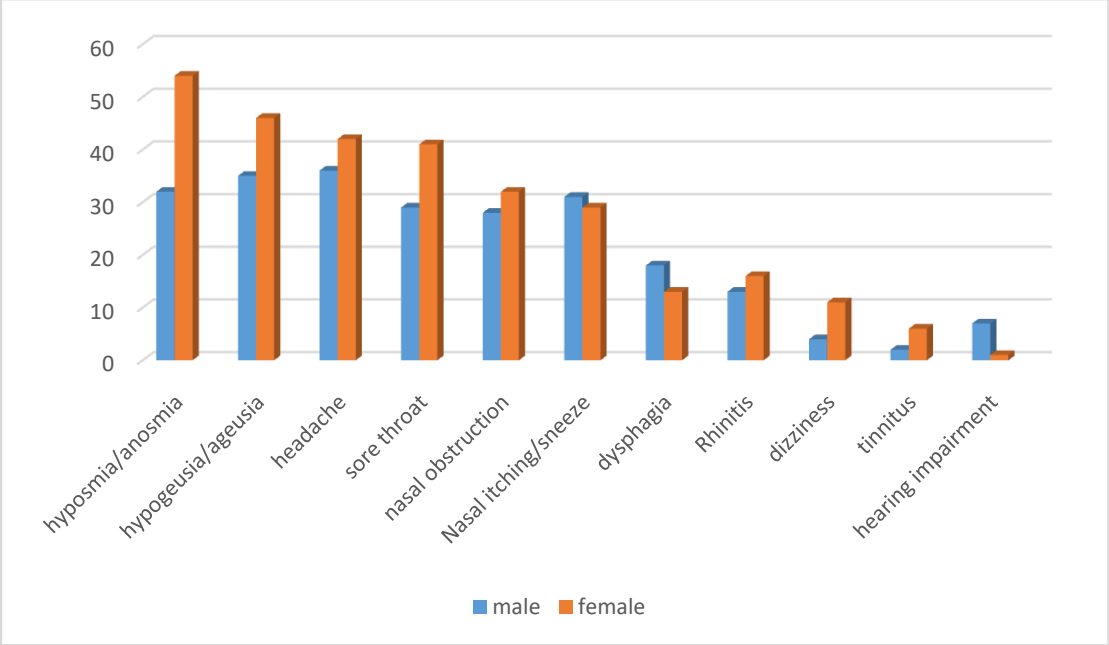

Figure (3):sex distribution of otolaryngological manifestations.

Discussion

COVID 19 manifestations vary from no any symptoms to multiple organs dysfunction[16]. The nasal cavity, nasopharynx and/or the oropharynx are the primary sites of virus, so it is the main areato take sample for PCR test and main source of spread of infection[17].In our study we found that The commonestotolaryngologicalfeatures of COVID-19 are smell disturbancesin form of hyposmia, anosmia orparosmia (86%) and taste disturbances in form of hypogeusia, ageusia or dysgusia (85%), respectively. Those symptoms were followed by headache (78%), and sore throat (70%).Otological and nasal symptoms are are less common. these results are agree with the results of Müge Özçelik Korkmazet al. who found that smell disturbances (37.9%), taste disturbances (41.3) headache (37.1%), and sore throat (32.7%) respectively [18].Mohammad Waheed El-Anwaret al. found found that sore throat and headache were the most common ENT manifestations ,while nasal congestion , rhinorrhea ,and upper respiratory tract infection were less common and he concluded that ENT manifestations are less common than cough and fever[17].Joanna KT et al. found that thecommonest symptoms are dyspnea, sore throat, and cough.Nasal discharge, nasal obstruction and dizziness are less common [7].Menni et al. reportedthat smell and taste losswere found in 59% of PCR positive patients in comparison to 18% of patients with negative PCRtest[19].Varia et al. found that 73.6% of patients had taste or smell abnormalities and 14.4% had isolated smellabnormalities[20].Lechien et al. found that 85.6% olfactory dysfunction [21].Kaye et al. reported anosmia in 73% of patients, and the anosmia was the early symptom in 26.6% and Heconcluded thatisolated anosmia is suspicious for COVID-19 infection[22].Mao et al. reportedloss of smell in 5.1% of patients[23].Meng X et al. found that throatpain and nasal discharge are the most common sympyoms[24].Gautier JF et al., Agyeman AA et al found that the commonest symptoms are tasteand smell abnormalities[25, 26].Vaira LA et al foundthat both taste and smell abnormalities in 19% [27].Sayin İ et al. reported that smell and taste abnormalities was common in COVID 19 patients [28]. In this study we found that that most of the otolaryngological manifestations are present in patients who are between 61 and 70 years , and females show more otolaryngological manifestations than males.This results are similar to the results of Müge Özçelik Korkmazet al.[18].

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Conclusion

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