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Incidence of anosmia and rescue from anosmia among COVID-19 patients in Aseer region of kingdom of Saudi Arabia

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SUMMARY

Background: The viruses that cause the common cold are well known for causing post-infectious loss, and post-viral anosmia is one of the most common causes of anosmia in adults, accounting for up to 40% of cases. COVID-19 has also had a significant effect on public health due to its higher degree of transmissibility, which has resulted in rapid global spread. Methods: This is a retrospective analysis that took place between August 2020 to February 2021. The research focused on COVID-19 patients that had already been diagnosed and were admitted to Alnamas, Tanoma and Albashir hospitals The data was gathered through the purposely constructed questionnaire. Through E-link and telephonic survey, the questionnaire was constructed by the panel of specialist including subject specialists, researchers, English language experts Results: Out of total 198 respondents (Covid-19 patients) 62% were male while 38% were females. Cronbach alpha of the questionnaire was 0.81. Mean (SD) of the age of respondent was 39.5 (8.5). We have observed significant difference while we comparing age and anosmia. Conclusion: We concluded that anosmia is also one of the symptoms of covid-19. In the COVID-19 battle, using loss of smell and taste as an infection marker will be a powerful tool.

Key words: anosmia, Covid-19, symptoms, diseases

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INTRODUCTION

The coronavirus-2019 disease (COVID-19) is an on-going viral pandemic caused by the coronavirus-2, which causes extreme acute respiratory syndrome (SARS-CoV-2). Covid-19 was discovered for the first time in December 2019 in Wuhan, China. On March 2020 [1]. The World Health Organization (WHO) declared it a global concern. There were 8,708,008 confirmed cases worldwide in June 2020, with 461,715 deaths [2].

The viruses that cause the common cold are well known for causing post-infectious loss, and post-viral anosmia is one of the most common causes of anosmia in adults, accounting for up to 40% of cases. COVID-19 has also had a significant effect on public health due to its higher degree of transmissibility, which has resulted in rapid global spread. The new coronavirus can spread between people through respiratory droplets, aerosol, or contaminated vomit [3].

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Early reports of anosmia occurring in association with COVID-19 appeared in the press; in Germany, one study found that more than 2 in 3 confirmed reported loss of smell and taste [5-6].

The current study was inspired by a rise in cases of Sudden Loss of Smell (SLoS) reported in medical care during the COVID-19 pandemic. The physiological role of olfaction in recognizing environmental factors and future threats is so great that it has been linked to a decrease in life expectancy. The symptoms of anosmia and ageusia are considered crucial in the diagnosis of COVID-19. A multi centric European study conducted on 417 COVID-19 patients to examine the prevalence of olfactory and GD disorders found that they had smell (85.6%) and taste (88.0%) disorders [7].

In a study of 3191 COVID-19+ patients with mild disease who were self-isolating at home, 15.3% reported a loss of smell or taste. Many anecdotal accounts of an elevated occurrence of anosmia have been widely circulated on medical message boards by surgeons from all over the world who are dealing with a high number of COVID-19 cases [8-10].

In our study the main aim is to find out the prevalence of anosmia and recovery from anosmia among COVID-19 patients in

Aseer region of Kingdom of Saudi Arabia further also raise awareness of the possible connection between COVID-19 and ENT surgeons, and to promote the use of Personal Protective Equipment (PPE) in such cases. Following the statement's publication, celebrities, politicians, and others have posted their recent onset of anosmia on social media, both confirmed and unconfirmed COVID-19 cases.

According to a study conducted in Taif, Saudi Arabia, Olfactory Dysfunction (OD) and ageusia are highly prevalent symptoms. They're worth paying attention to because they're highly suggestive of COVID-19 infection, particularly when it's accompanied by other neurological symptoms including exhaustion, headache, and myalgia [7].

As a symptom of COVID-19, anosmia is becoming more common. However, only a few studies have been carried out in the Kingdom of Saudi Arabia (KSA). As a result, the aim of this study was to determine the prevalence of anosmia in COVID-19 patients in the Aseer region of Saudi Arabia.

METHODS

This is a retrospective analysis that took place between August 2020 to February 2021 Its aim was to determine the prevalence of anosmia among COVID-19 patients in Aseer region of Saudi Arabia, as well as its characteristics and length. In addition, the researcher wanted to see if there was a connection between anosmia and common COVID-19 symptoms. The research focused on COVID-19 patients that had already been diagnosed and were admitted to Alnamas, Tanoma and Albashir hospitals.

The data was gathered through the purposely constructed questionnaire. (Through E-link and telephonic survey) the questionnaire was constructed by the panel of specialist including subject specialists, researchers, English language experts. The first section of the questionnaire was composed of two sections, first section consist of demographical variables i.e. age, gender, income status, education status. Second section of questionnaire was composed of the symptoms, other diseases, anosmia related questions. Further we repeat the survey after two weeks to measure the differences. Descriptive (mean (SD), frequencies and percentages) and inferential statistics were obtained. T test and chi-square test was used to measure the degree of association. Patients consent was taken and assured them that their identity will be confidential, although it is an anonymous electronic questionnaire. Ethical approval was obtained from same hospitals

RESULTS

Out of total 198 respondents (Covid-19 patients) 62% were male while 38% were females. Cronbach alpha of the questionnaire was 0.81. Mean (SD) of the age of respondent was 39.5 (8.5).

Table 1 depicted that we have observed significant difference while we comparing age and anosmia, (p value less than 0.05).

Figure 1 depicted that 20% of the patients have no other symptoms, while 32% have multiple symptoms, 12% have fatigue, 9% have dizziness, 8% have Myalgia, 9% have fever, and 10% have cough. Figure 2 depicted that there is a significant change in first and second survey (second survey was conducted after 10 days of first survey) p=0.001.

We have observed significant differences among gender regarding anosmia (Table 2).

Figure 3 depicted that out of 198 respondents, 76 have anosmia while 122 have other symptoms.

Tab. 1. Comparison between age and anosmia

	Anosmia		
Age	**Yes**	**No**	**Total**
1-20 years	25	48	44
20-35 years	14	14	28
35-60 years	18	35	53
above 60	19	25	73
Total	76	122	198
p=0.0001			

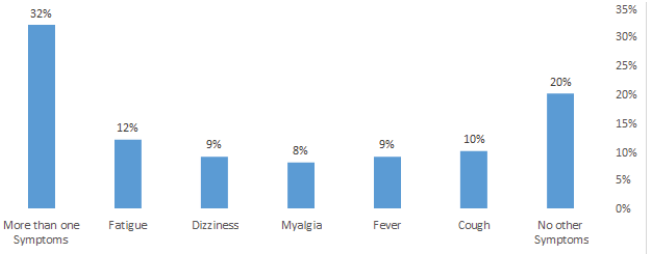

Fig.1. Other symptoms with anosmia

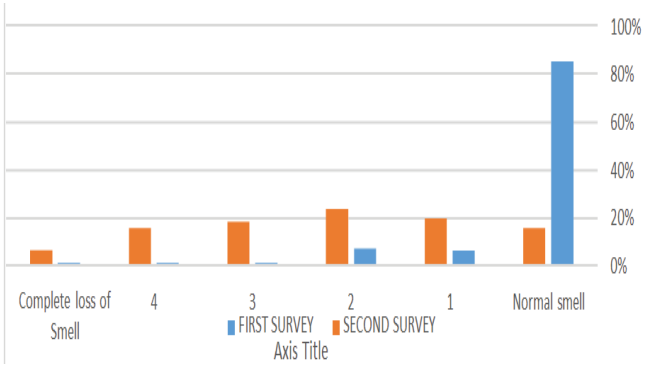

Fig.2. Comparisons of first and second survey

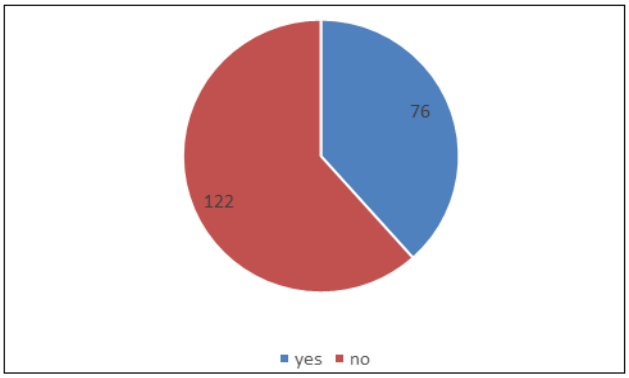

Fig.3. Prevalence of anosmia

Tab. 2. Gender difference regarding anosmia

	Present	**Not Present**
Male	45	85
Female	31	37
p<0.001		

DISCUSSION

In our study the main aim is to find out the prevalence of anosmia and recovery from anosmia among COVID-19 patients in Aseer region of Kingdom of Saudi Arabia, In our study 76 patients had anosmia , while 15 patients had exclusively only Anosmia symptoms of covid-19, which is comparable withy study of Hopkins et al, they stated that anosmia is often identified in combination with other coronas virus symptoms, one out of every six patients with recent onset anosmia reports it as a stand-alone symptom [10-12]. Further the study conducted in Taif also match able with our findings in their study 32% have anosmia symptoms [7].

In an interview with 59 COVID-19 patients in the hospital, Giacomelli et al. discovered that 34% registered a smell or taste disturbance [13-14]. They observed some significant differences among genders as in in Taif based study [7], we also have significant gender while comparing anosmia, which is also confirmed by our study that we have also observed significant gender differences.

In our study, the patients having anosmia out of them 20% of the patients have no other symptoms, while 32% have multiple other symptoms, 12% have fatigue, 9% have dizziness , 8% have Myalgia, 9% have fever, and 10% have cough. Which is in line with many local and international studies?

In our study we have observed anosmia is higher among the younger age group, Anosmia is more common in mild-moderate disease than in serious disease, and in younger age groups, according to some published research [15-18].

As per Hopkins et al. [12-13] as they stated that within a few weeks, nearly 80% of patients report improvement in their loss of sense of smell, according to our research, similar trend was observed in our study that majority of the patients were recovered from anosmia. Their taste ability was recovering progressively

Importantly, virological testing of patients with mild COVID-19 symptoms, including smell and taste disturbance in some, revealed high levels of viral shedding, indicating that these patients could spread disease and that self-isolation is recommended.

CONFLICT OF INTEREST

Nil.

CONCLUSION

We concluded that anosmia is also one of the symptoms of covid-19. In the COVID-19 battle, using loss of smell and taste as an infection marker will be a powerful tool. Since anosmia is strongly predictive of COVID-19 infection, it deserves special consideration. Further studies are also required to explore more explanations and discover more ways to identify and recover anosmia and other symptoms.

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