

INTRODUCTION

According to recently published data, olfactory and gustatory chemosensory impairment are very prevalent in COVID-19 infection. In our previous study, we have reported initial symptoms and prevalence of olfactory and gustatory dysfunction among COVID-19 patients. We found that impaired sense of smell or taste as a presenting symptom can be as high as 38%. Similar to our results, Coelho et al. found that 37.7% of their study group reported subjective olfactory or gustatory dysfunction as a presenting symptom.

OBJECTIVES

To explore olfactory and gustatory function recovery among COVID-19 patients who presented with chemosensory dysfunction as a presenting symptom.

METHOD

This is a cross-sectional follow-up study, which serves as a sequel to a study by Biadsee, et al. Among the previous study population of 128 non-hospitalized patients, who were tested positive for COVID-19 by reverse transcription-polymerase chain reaction (RT-PCR). Ninety-seven patients participated in a telephone survey designed for this study. Recovery of olfactory and gustatory functions were defined when a score is greater or equal to that reported before the disease. Persistent hyposmia and hypogeusia were defined as lower scores reported during follow-up, compared with scores before the disease

RESULTS

A total of 43 men and 54 women were included. Mean age was 37 years (range 18-73). Mean follow-up was 59.2 days (range 21-83). At follow-up, 72 (74.2%) patients reported normalization of gustatory function and 63 (64.9%) reported normalization of olfactory function. No patient reported nasal obstruction at follow-up. Recovery of olfactory function was positively correlated with gustatory recovery ($p=0.003$). Twenty-three (23.7%) reported persistent xerostomia. Women who reported persistent xerostomia had higher rates of olfactory and gustatory dysfunction ($p=0.006$ and $p=0.008$, respectively) than those who did not. Olfactory and gustatory disorders as initial symptoms were negative prognostic factors for recovery

Table 2. Patient demographics

Variable	Men	Women	Total
Mean age (year \pm SD)	38.5 \pm 15.9	35.7 \pm 17.8	37 \pm 17
Ailment period (days \pm SD)	26 \pm 10.5	26.3 \pm 9.7	26.2 \pm 10
Follow-up period (days \pm SD)	59.5 \pm 11.2	59 \pm 10.7	59.2 \pm 10.8
Initial loss of taste symptom ^a , n (%)	13 (13)	21 (21)	34 (35)
Initial loss of smell symptom ^a , n (%)	17 (17)	21 (21)	38 (39)

Table 3. A comparison of taste and smell scores between males and females.

	Mean Taste score		Mean Smell score	
	Before ^a	After	Before ^a	After
Male	9.37 \pm 1	8.88 \pm 2.3	9.05 \pm 1.4	8.91 \pm 1.9
Female	9.5 \pm 0.9	8.85 \pm 2.1	9.2 \pm 1.2	8.15 \pm 2.2
p value	0.53	0.94	0.58	0.08

^a Data obtained from the previous study.

CONCLUSIONS

Olfactory and/or gustatory dysfunction as a presenting symptom of COVID-19 infection may be a negative prognostic factor for full recovery of olfactory and gustatory function.