CASE REPORTS

SUDDEN ANOSMIA - HIDDEN INTIMATION OF NOVEL CORONAVIRUS

Sana Abbas, Aisha Rafique, Amjad Akram, Omer Zafar, Basit Mehmood Khan*, Beenish Abbas

Armed Forces Institute of Ophthalmology/National University of Medical Sciences (NUMS) Rawalpindi Pakistan, *Combined Military Hospital/National University of Medical Sciences (NUMS) Rawalpindi Pakistan

ABSTRACT

The coronavirus infection 2019 (COVID-19) is a progressing viral pandemic. Adverse impacts related to COVID-19 are usually includes sore throat, cough, fever and dyspnea. Anosmia emerged as newer reported symptom however, recognition awaited from the World Health Organization (WHO) and Center for Infection Control and Prevention (CDC). This case series features an instance of isolated abrupt presentation of anosmia as a manifestation of COVID-19 between two young males with parallelism of smoking and modest disease manifestation. Loss of smell is demonstrative of COVID-19 disease and has significant ramifications with regards to healthcare workers working close to infected therefore has increased susceptibility.

Keywords: Anosmia, Coronavirus, Smoker.

INTRODUCTION

The most widely recognized clinical exhibitions of COVID-19 incorporate fever, cough, weakness, cerebral pain, gastrointestinal distress, respiratory distress, deranged coagulation profile, dyspnea furthermore, myalgia[1]. Anosmia during viral prodromal phase and active infection accounts for 40% instances among adults. Common cold viruses are well known for this manifestation and coronaviruses are thought to represent 10-15% cases as they have potential to invade the central nervous system with propagation to olfactory bulb[2]. Acceptable proofs of interrelation of anosmia and hyposmiawith SARS-Cov 2 virus documented from South Korea, Germany and Italy[3].

Despite anecdotal affirmation, still, there is paucity of literature on the subject, therefore, this case series furnished to pinnacle subject.

Case-1

Our first patient 28 years old male, known smoker having no other comorbid complained of sudden onset of loss of sense of smell especially noted when smoking. Patient had further worsening of anosmia following two days during which he developed symptoms of productive cough and body aches. Patient-reported to emergency department. There was no significant travel history. However, he had been in open markets several times a week before. Upon examination Fever 100°F was recorded, respiratory rate of 16 breath per minutes, and blood pressure of 110/70 mm of Hg associated with pharyngitis. Auscultation showed normal vesicular breathing. Chest X-ray exhibited bilateral symmetrical infiltrates and validated with COVID-19 positive PCR, rest of haematological and biochemical like C-reactive protein, coagulation profile, serum ferritin, serum lactate dehydrogenase levels were well within limits. Keeping in view the resolution phase of patient, home quarantine opted. However, the patient developed productive cough with mucoid sputum at 6th day of presentation, consequently, prescribed Tab Azithromycin (500 mg) once daily for five days along with calcium and zinc supplementation for four weeks. Patient was asymptomatic on 10th day and confirmed with two consecutive negative PCR on 13th and 14th Day. During course of his infection and treatment anosmia resolved and patient could well recognize smell after recovery.

Case-2

Second patient was 32 years old male, known smoker with no reported comorbid,

Correspondence: Dr Aisha Rafique, Dept of Ophthalmology, Armed Forces Institute of Ophthalmology, Rawalpindi Pakistan
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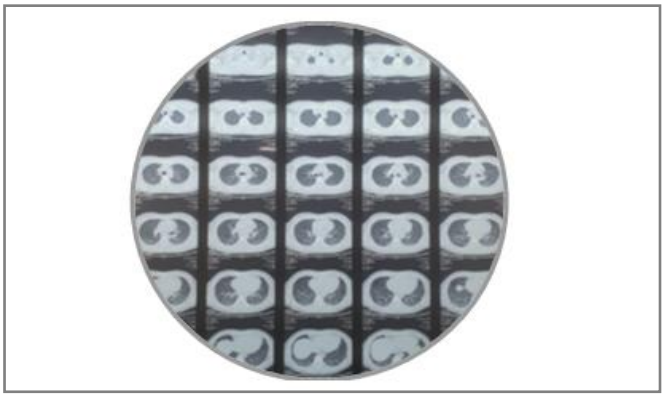
discovered sudden anosmia when he woke up in the morning which was confirmed when he was unable to smell formalin as well. Patient-reported to emergency department. Patient had contact history with COVID-19 positive colleague. No notable verdicts recorded upon general physical and systemic examination. Chest X-ray exhibited bilateral symmetrical infiltrates and HRCT chest revealed patches of ground glass haze forming mosaic attenuation pattern in bilateral lower lobe suggestive for COVID -19 infection (figure). Diagnosis was reinforced with positive PCR. Patient was admitted to Tertiary Care Hospital although asymptomatic. Laboratory investigations including haematological and biochemical markers including C-reactive protein, serum LDH, serum Ferritin, serum Lipid Profile and ABG's were within the specified range. He was prescribed Tab Ivermectin (6mg) stat, repeated after 24 hours and Tab Azithromycin (500 mg) once daily for five days along with vitamin D, Calcium and Zinc supplementation for four week. Patient was asymptomatic therefore discharged on 7th day of admission. Recovery endorsed with two consecutive negative PCR on 11th and 12th Day. Anosmia resolved during course of treatment.



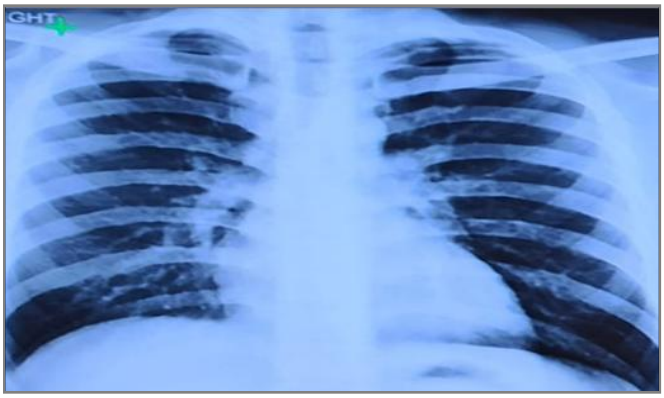


Figure: Radiological expression of COVID-19.

DISCUSSION

Nasal respiratory and olfactory epithelial cells have been appeared to communicate elevated levels of ACE2 proteins utilized by the SARS-Cov-2 infection, which causes the COVID-19 affliction, to contaminate cells[4]. The component at present is additionally bantered with some recommending the SARS-CoV-2 infection is neurotropic yet others contending the declaration of target receptors in non-neuronal olfactory / nasal domain cells proposes a potential inflammation with pervasive reason for anosmia[5,6].

Although no co connection inferred between anosmia, smoking and COVID-19 contagion, however as indicated by the World Health Organization (WHO), the individuals who smoke are probably persuadable against contamination because of decreased lung capacity furthermore, increment in oxygen needs or decreased capacity

Table: Summary of patients.

Case No.	Age/ Gender	Patient History	Polymerase Chain Reaction	Diagnostic Workup	Medical History	Recovery
1.	28 Years/ Male	Anosmia worsened over 2 days followed by Fever, Cough and Sore throat	Positive	Chest X-ray Bilateral Infiltrates	Smoker	14th Day
2.	32 Years/ Male	Abrupt Anosmia, Asymptomatic otherwise	Positive	High resolution computerized tomography - bilateral ground - glass opacities	Smoker	10th Day

of the body to utilize it appropriately[7,8]. We stemmed the similarity of smoking, young age and mild-moderate disease interpretation between our preferred cases. Obesity can make pronounced changes in respiratory mechanics which may prompt a debilitated respiratory capacity and an inclination to respiratory diseases, for example, asthma. Nevertheless, it isn't kenned whether these progressions additionally incline to COVID-19, or whether COVID-19 can worsen antecedent respiratory infection in individuals with obesity but we have considered this supposition as one of our patient was obese[9].

Lee *et al* researched the pervasiveness of olfactory and gustatory findings. It was seen in 15.3% (488/3,191) patients at the inception of COVID-19 and in 15.7% (367/2,342) patients with asymptomatic to milddisease manifestation with notable ubiquity among young patients (p<0.001). Most patients with anosmia or ageusia recuperated inside 3 weeks, with a median period of 7 days 10.

National Health bodies of the United Kingdom and the United States of America have advocated the incorporation of new-onset anosmia as a diagnostic criteria in the World Health Organization. It is recommended to quarantine such patients with mandatory diagnostic workup and chasing of red flag signs.

CONFLICT OF INTEREST

This study has no conflict of interest to be declared by any author.

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