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A Case Report

ANOSMIA IN COVID-19: A CASE REPORT**Saad Ur Rahman*¹, Shaheer Zahid², Seemab Imtiaz Gill¹, Sehar Altaf³, Imtiaz Ahmad³,
Muhammad Wajeeh Nazar⁴**¹ King Edward Medical University, Pakistan.² Saint James School of Medicine, USA.³ Nawaz Sharif Medical College, Pakistan⁴ CMH Multan Institute of Medical Sciences, Pakistan.**Article Received:** September 2020 **Accepted:** September 2020 **Published:** October 2020**Abstract:**

Anosmia, the loss of olfaction; could be neurosensorial or conductive. Viral rhinosinusitis continues to be the most common cause of anosmia. COVID-19 is caused by SARS-CoV2; it usually presents with symptoms of fever, cough, and fatigue. We report a case of a 64-year-old African American male, presenting with anosmia, anorexia, weight loss over six days. After conducting diagnostic tests, the chest CT showed bilateral lung parenchymal infiltrates, raising suspicion of COVID-19. PCR testing confirmed COVID-19.

Keywords: Anosmia, COVID-19, SARS-CoV2.

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INTRODUCTION:

Anosmia is the loss of smelling sensation. It could be caused by a variety of conditions, including viral rhinosinusitis, trauma, and neurodegenerative diseases. Elderly patients and African Americans are more frequently affected than younger patients or Caucasians. ^[1] Coronavirus disease (COVID-19) caused by SARS-CoV2; consequences into a life-threatening disease, attacking the human respiratory tract; clotting vessels, and causing renal injury. The incubation period of COVID-19 is roughly 5 days; after which the symptoms of the disease become evident. ^[2] We present an asymptomatic case of COVID-19, with a single presenting complaint of anosmia; without any typical symptom of fever, cough, or fatigue ^[3]. Such a unique and atypical presentation warrants a case report.

CASE PRESENTATION:

A 64-year-old African American male presented at the emergency department, with the presenting complaints of anorexia, weight loss, fatigue, and anosmia since a week. On history taking, weight loss seemed uncertain. The patient confirmed no shortness

of breath, cough, or chest discomfort. Furthermore, the patient denied any fever, nausea, vomiting, urinary trouble, or bowel irregularity, or sleep disturbance. The physical examination was documented to be normal, except for an inability to smell.

Emergency consultants ordered a CT scan of the chest, abdomen, and pelvis; COVID-19 was suspected on account of local rampant spread and no possible cause of anosmia. The patient was advised to quarantine on precaution until lab results were confirmed.

The results of investigations confirmed the suspicion of COVID-19. Chest CT showed bilateral infiltrates (Figure 1) while CT of the abdomen and pelvis were unremarkable. The patient was instructed about cautionary measures including repetitive hand washing and social distancing, since no specific treatment is currently available. In case of any serious symptoms, the patient was advised to contact the COVID-19 helpline immediately.

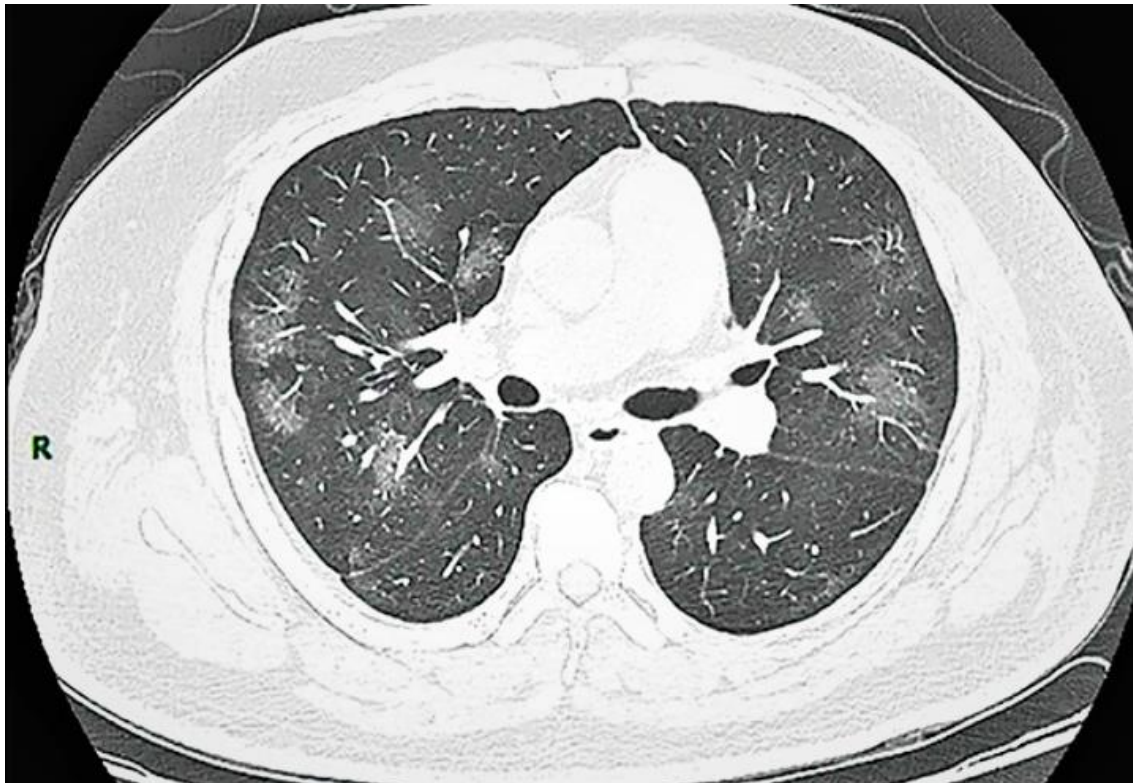


Figure 1: Chest CT

DISCUSSION:

Olfactory disturbances could either be conductive or neurosensorial in nature. Conductive anosmia has a fundamental airflow origin manifesting itself in pathological anomalies like chronic rhinosinusitis, sinonasal neoplasms, allergic rhinitis, and septal deviation. [4] The most common cause of anosmia is viral rhinosinusitis which accounts for almost 40% of all the cases. It leads to nasal congestion resulting in conductive olfactory loss. [5] Neurosensorial anosmia signifies a pathology in the olfactory neural pathway that could be due to a lesion at any point of the olfactory tract. This could include viral infections of the upper respiratory tract, inhalation of toxins, head trauma, or congenital and neurodegenerative diseases of the brain. [6]

The patient presented had no rhinorrhea or watering of eyes excluding the differential diagnosis of rhinosinusitis. Moreover, there was no history of previous trauma or any neurodegenerative disease. The anosmia was sudden in onset. A scant amount of literature published on similar cases discussed anosmia occurring concurrently with the loss of taste sensation, in COVID-19 patients. The literature does not document anosmia as a singular symptom of COVID-19. [7]

Coronavirus has a notorious reputation; and has been held responsible for several diseases, including common flu, Middle East Respiratory Syndrome (MERS-CoV), and Severe Acute Respiratory Syndrome (SARS-CoV). [8] COVID-19 is a novel form of the virus; under scrutiny. [9] The most common symptoms reported are fever, dry cough, fatigue, [10, 11] myalgia, arthralgia, and breathing difficulties [12, 13] However, unusual presentations should be mandatorily reported amidst this pandemic for a thorough assessment of the virus's pathologic nature.

Anosmia has been noticed in a lot of patients suffering from COVID-19. [14] A survey in South Korea with two thousand COVID-19 positive patients reported thirty percent with anosmia as one of the several presenting complaints. [15] Another study conducted on European patients had similar results. [16] Pathophysiology of the process is still elusive, but it has been suggested SARS-COV-2 enters nerves through the olfactory epithelium using the help of angiotensin-converting enzyme and transmembrane serine protease 2. [17]

Even though the theory of nerve damage makes sense and virus spread is via aerosol transmission, none of these studies report anosmia as a single isolated symptom of COVID-19. The literature search is

exhaustive and done in vain, when anosmia, is a single, isolated symptom of COVID-19.

CONCLUSION:

COVID-19 typically presents with fever, cough, and fatigue. We reported an asymptomatic 64-year-old patient. On performing CT chest, bilateral infiltrates were evident suggesting COVID-19. We propose that asymptomatic patients should not be ignored, and anosmia can be a single independent manifestation of COVID-19. Diagnostic tests and investigations are mandatory for such asymptomatic patients. Medical vigilance is of the utmost importance in such circumstances.

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