



ANOSMIA AS AN EARLY SYMPTOM IN PATIENTS WITH COVID-19

LA ANOSMIA COMO SÍNTOMA TEMPRANO EN PACIENTES CON COVID-19

Alex Huamán-Navarro^{1,2,a}, Juliana Aparcana-Machado^{3,b}

Mr. Editor

From the time of knowledge of the outbreak appearance in mid-December 2019 due to the new coronavirus (SARS-CoV-2) in the city of Wuhan, China, epidemiologic and clinical studies have been developing to best define the symptomatology of the disease from coronavirus 2019 (COVID-19). However, within some significant reports, we have been informed that one of the initial symptoms of this disease can also be alterations in smell and taste (30 and 60% in the Korean and German series, respectively)⁽¹⁾.

COVID-19 commonly produces fever, dry cough and respiratory distress, but some publications also report cases regarding alterations in the senses of taste and smell, likewise, in a statement presented by the Sociedad de Rinología Británica, it is detailed that good evidence exists in countries such as South Korea, China and Italy, where a significant number of patients with a positive infection for COVID-19 have developed loss of smell (anosmia) and a partial reduction of such (hyposmia), as in Germany, where 2 out of 3 confirmed cases for COVID-19 have anosmia⁽¹⁾.

In a hospital in Milan, Italy, in a study regarding olfactory and taste disorders developed among hospitalized patients with COVID-19, it was informed that out of 59 patients interviewed, 33.9% informed having at least one taste or smell disorder and 18.6% had both alterations⁽²⁾. For this reason, we should not underestimate the measures in addition to the temperature monitoring that some countries have adopted such as South Korea, a country that is surviving the pandemic in an exemplary way, where early detection of patients with probable COVID-19 infection is also performed through the acetic acid (vinegar) test, which consists of the patient detecting the substance's smell, if it is not recognized or there exists any difficulty then they are asked to enter an isolation zone and follow-up to rule-out COVID-19⁽³⁾.

In a report of cases, it was found that some people manifested anosmia suddenly, isolated and without nasal congestion, and days later resulted positive for COVID-19, it was even evidenced in Google trends that towards end of February 2020 the search tendency of "anosmia" started to increase in countries such as Italy, United Kingdom and United States, which gives evidence to its association to COVID-19 increase of cases in these countries⁽⁴⁾.

Recently in a multicentric study in 12 European hospitals of different countries such as France, Italy, Spain and Belgium, which recruited 417 people with COVID-19 diagnosis, we found that 85.6% and 88.0% of patients reported having olfactory and taste dysfunctions, respectively. Out of all the patients with olfactory dysfunctions (357), 79.6% were anosmic and 20.4% had hyposmia. That is why we concluded that olfactory and taste disorders are prevalent symptoms in European patients with COVID-19⁽⁵⁾ and it is recommended to identify them in a timely manner for the early detection of asymptomatic patients with this disease just as the Sociedad Española de Neurología has also been suggesting.

¹ Universidad Privada San Juan Bautista, Ica-Perú.

² Asociación de Investigación y Ciencia de los estudiantes de Medicina (ASICEM).

³ Departamento de Neurología, Hospital Regional de Ica, Ica-Perú.

^a Medical student.

^b Medical Specialist in Neurology.

Cite as: Alex Huamán-Navarro, Juliana Aparcana-Machado. Anosmia as an early symptom in patients with COVID-19. Rev. Fac. Med. Hum. July 2020; 20(3):540-541. DOI 10.25176/RFMH.v20i3.2949





The physiopathologic mechanism by which COVID-19 is associated to taste and smell are still unclear, but evidence exists in which it has been informed that the brain expresses angiotensin converting enzyme type 2 receptors, SARS-CoV-2 target receptors, that are found on glial and neuronal cells, which converts them in a potential target for COVID-19, causing neuronal damage and death, covering from peripheral neurons through the cribriform plate to the olfactory bulb⁽⁶⁾. Hence the importance, that for the SARS-CoV-2 infection confirmation through molecular tests, nasal and pharyngeal swabs are required, which strongly sums up that there is a high viral load in these zones.

Therefore, it is recommended to take into account and consider these symptoms (anosmia and hyposmia) within the epidemiologic clinical investigation sheet from the Ministry of Health of Peru (Ministerio de Salud del Peru), as part of the diagnosis for early detection of the disease, since recognizing it promptly, including in the first level of attention, would be very beneficial, in turn, it is also clear that it is necessary to amplify studies and obtain more data about the olfactory and taste tests in COVID-19 confirmed patients in the country, to provide and amplify a greater scientific information, with the objective of early detection of asymptomatic patients with probable SARS-CoV-2 infection and in this way avoid its spread.

Author's contribution: The authors participated in the genesis of the idea, information gathering, writing and final version of the original article.

Funding sources: Self-financed.

Conflict of interest: The authors declare that they have no conflicts of interest in the publication of this article.

Received: April 15, 2020 / **Approved:** May 20, 2020

Correspondence: Alex Stiven Huamán Navarro.

Address: Av. Montevideo 249, La Tinguiña, Ica-Perú.

Telephone number: +51 944916960

E-mail: alex_hn22@outlook.com

BIBLIOGRAPHIC REFERENCES

- Hopkins C. Loss of sense of smell as marker of COVID-19 infection. London; 2020 Mar. Disponible en: [https://www.entuk.org/sites/default/files/files/Loss of sense of smell as marker of COVID.pdf](https://www.entuk.org/sites/default/files/files/Loss%20of%20sense%20of%20smell%20as%20marker%20of%20COVID-19.pdf)
- Giacomelli A, Pezzati L, Conti F, Bernacchia D, Siano M, Oreni L, et al. Self-reported olfactory and taste disorders in SARS-CoV-2 patients: a cross-sectional study. *Clin Infect Dis*. 2020;Ciaa330:2. DOI: 10.1093/cid/ciaa330/5811989
- Mundo. Coronavirus: Militares de EE.UU en Corea del Sur usan práctico test para detectar COVID-19 | Corea del Sur. La República. 2019. Disponible en: <https://larepublica.pe/mundo/2020/04/05/coronavirus-militares-usan-sencillo-test-para-detectar-covid-19-corea-del-sur-rddr/>
- Gane SB, Kelly C, Hopkins C. Isolated sudden onset anosmia in COVID-19 infection. A novel syndrome? *Rhinolog*. 2020 ; DOI: <https://doi.org/10.4193/Rhin20.114>
- Lechien JR, Chiesa-Estomba CM, De Siati DR, Horoi M, Le Bon SD, Rodriguez A, et al. Olfactory and gustatory dysfunctions as a clinical presentation of mild-to-moderate forms of the coronavirus disease (COVID-19): a multicenter European study. *Eur Arch Otorhinolaryngol*. 2020; DOI: <https://doi.org/10.1007/s00405-020-05965-1>
- Baig AM, Khaleeq A, Ali U, Syeda H. Evidence of the COVID-19 Virus Targeting the CNS: Tissue Distribution, Host-Virus Interaction, and Proposed Neurotropic Mechanisms. *ACS Chem Neurosci*. 2020 Mar 13;11:995–998. DOI: 10.1021/acscchemneuro.0c00122

Indexed in:



http://www.scielo.org.pe/scielo.php?script=sci_serial&pid=2308-0531&lng=es&nrm=iso



<https://network.bepress.com/>



<https://doaj.org/>



<http://lilacs.bvsalud.org/es/2017/07/10/revistas-indizadas-en-lilacs/>

