

Olfactory disorders during SARS-CoV-2 infection

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At the end of 2019 in Wuhan, China, a novel coronavirus, Severe Acute Respiratory Syndrome Corona virus 2 (SARS-CoV-2), was considered as the cause of some lower respiratory tract infections. On February 11th 2020, the new disease caused by the SARS-CoV-2 virus was officially termed “COVID-19” by the WHO. Transmission from person to person occurs mainly by direct contact or droplets spread by coughing or sneezing by an infected individual with SARS-CoV-2. The most common symptoms are fever, cough, fatigue, headache, and dyspnea. In the most severe cases, patients may develop pneumonia, acute respiratory failure, distress syndrome, and acute heart problems. The most common ENT symptoms are cough, anosmia/hyposmia, sore throat, ageusia, nasal congestion, runny nose, postnasal discharge, hoarseness, otalgia, tinnitus, gingivitis, Bell’s palsy, and sudden hearing loss. Literature data showed that olfactory disorders were found in 35% to 84.6% of patients. From March to November 2021, in Zadar General Hospital 2582 patients were hospitalized with SARS-CoV-2 virus infection. Anosmia/hyposmia was found in 1110 (43%) patients. In most patients with olfactory disturbances after fourteen days, the epithelium showed signs of recovery, but it had not yet returned to normal. The infection made desquamation of the olfactory epithelium and the preference for the virus for sustentacular cells rather than neuronal cells and the intense recruitment of immune cells. Damage to sustentacular cells and Bowman cells directly affects the perception of odors, not by the transmission of the virus to olfactory receptor neurons but by impairing some of its functions that are necessary for the functional metabolism of these neurons. Damage to Bowman cells would cause an interruption in the production of nasal mucus, necessary for the dissolution of odorous particles.

Keywords: SARS-CoV-2 infection, olfaction disorders, smell