

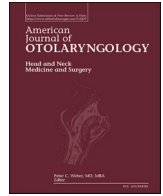


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# American Journal of Otolaryngology–Head and Neck Medicine and Surgery

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Commentary

## Is there really a correlation between viral load and olfactory and gustatory dysfunction?

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We read with great interest the response to our article by Vaira et al. Due to the scarcity of literature on this topic, it opened up a different perspective.

As pointed out by the authors, one limitation of our study was lack of objective evaluation of olfactory and gustatory dysfunction. It has been found that objective evaluation has revealed a higher prevalence of olfactory and gustatory dysfunction than subjective evaluation. In a meta analysis by Hannum et al. [1], studies using objective methods reported a prevalence of around 77% overall, whereas those using subjective methods reported around 45%.

It has been observed that patients with asymptomatic or mild SARS-CoV-2 infection with a higher viral load require a longer time to exhibit negative qPCR results, suggesting that Ct values reflect viral load in principle [2,3]. Studies show that ACE2 (SARS-CoV-2 entry receptor) and TMPRSS2 (viral entry-associated protease) mRNAs are highly expressed in nasal epithelial cells, which suggests that the nasal cavity is an important site for viral replication [4,5]. This could possibly explain the higher viral burden in patients with olfactory and taste dysfunction as found in our study.

However, further research is required to study the inflammatory reaction at the level of the olfactory epithelium.

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#### Declaration of competing interest

None declared.

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