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REPLY

Reply to: It is necessary to assess olfactory and gustatory functions in post-COVID-19 patients due to the omicron variant infection

To the Editor,

We very much appreciated the letters from Machado et al. and are pleased to have inspired these interesting thoughts. The advent of the Omicron variant of SARS-CoV-2 has significantly reduced the prevalence of smell and taste dysfunction associated with COVID-19.[1,2] However, approximately 30% of individuals affected by COVID-19 driven by this variant still reported olfactory or gustatory impairment during the acute phase of the disease.[1] Moreover, when psychophysically evaluated, patients affected by the Omicron variant infection demonstrated a significantly higher prevalence of smell dysfunction than that observed in controls.[2]

Unfortunately, data about the evolution of Omicron-associated olfactory loss, that is, long-term prevalence and recovery rate, are not currently available. We believe it is crucial to monitor the trend of chemosensory dysfunction in these patients and strongly encourage using a comprehensive psychophysiological test battery. Several authors have highlighted that the self-assessment of olfactory abilities is inaccurate and leads to an underestimation of the prevalence of smell disorders also in COVID-19.[3]

Moreover, we recently observed that while patients significantly improved discrimination and identification capabilities more than 1 year after the infection, in our study little improvement emerged in threshold performances. This may place subjects at risk of exposure to environmental hazards.[4] Thus, a complete orthonasal evaluation of the olfactory function, including identification, discrimination, and threshold subtests, is crucial.

We, therefore, agree with Machado et al. that a complete psychophysical evaluation is imperative to gauge the degree of chemosensory dysfunction during Omicron waves accurately, distinguish between smell and taste impairment, measure residual olfactory function, and identify individuals who may be unaware of a persistent olfactory impairment. Furthermore, the prevalence of chemosensory alterations associated with the more recent circulating Omicron sublineages is unknown and should be intensively investigated.

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CONFLICT OF INTEREST STATEMENT

The authors declare that they have no conflicts of interest.

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REFERENCES

1. Boscolo-Rizzo P, Tirelli G, Meloni P, et al. Coronavirus disease 2019 (COVID-19)-related smell and taste impairment with widespread diffusion of severe acute respiratory syndrome-coronavirus-2 (SARS-CoV-2) Omicron variant. *Int Forum Allergy Rhinol*. 2022; 12(10): 1273-1281. doi: 10.1002/alr.22995
2. Vaira LA, Lechien JR, Deiana G, et al. Prevalence of olfactory dysfunction in D614G, alpha, delta and omicron waves: a psychophysical case-control study. *Rhinology*. 2022;61(1):32-38. doi: 10.4193/Rhin22.294
3. Boscolo-Rizzo P, Menegaldo A, Fabbris C, et al. Six-month psychophysical evaluation of olfactory dysfunction in patients with COVID-19. *Chem Senses*. 2021;1(46):bjab006. doi: 10.1093/chemse/bjab006
4. Boscolo-Rizzo P, Hummel T, Invitto S, et al. Psychophysical assessment of olfactory and gustatory function in post-mild COVID-19 patients: a matched case-control study with two-year follow-up. *Int Forum Allergy Rhinol*. 2023 Feb 28. doi: 10.1002/alr.23148 Online ahead of print