

Letter to the Editor

In Reference to *Impact of Nutritional Status on COVID-19-Induced Olfactory Dysfunction*

Dear Editor,

We read with great interest the article by Mastoloni et al.¹ published in *The Laryngoscope*. The authors provide valuable insights into the association between nutritional status and susceptibility to COVID-19-induced chemosensory dysfunction. Their findings that overnutrition increases the risk while undernutrition may offer slight protection are intriguing and contribute significantly to the current understanding of post-viral olfactory dysfunction.

However, the data presented could be interpreted with caution. The prevalence of olfactory dysfunction (OD) reported in this study is significantly lower than that documented by other researchers.^{2,3} This discrepancy raises concerns about potential underreporting,⁴ possibly due to variations in clinical documentation practices across different health care settings. Marginally, when comparing olfactory outcomes in inflammatory nasal conditions in people with different nutritional and weight status, we should also take into account that obesity and obesity-induced inflammation have a distinct role in the pathogenesis and evolution of respiratory disease.⁵ This potential and relatively less understood confounder should be also taken into account when recommending precaution in handling these data. Despite this limitation, the data remain compelling and merit further investigations.

The study presented by the authors is important because the search for risk factors for the persistence of OD has often yielded inconclusive results,^{6,7} and persistent post-COVID-19 OD has represented and continues to represent a serious issue given their high prevalence and the effects on patients' quality of life.⁸ Low levels of nasal secretory IgA (sIgA) have emerged as the most consistent risk factor for OD persistence.^{9,10} Studies have shown that sIgA levels are crucial in mucosal immunity and are not directly proportional to serum immunoglobulin G (IgG) levels.¹¹ Unlike IgG, sIgA is less efficiently induced by vaccines,¹² which might explain the continued high incidence of OD even with widespread vaccination¹³ and during reinfections.¹⁴ Substantial evidence suggests a direct relationship between obesity and reduced levels of

salivary and nasal sIgA.^{15,16} This immunological deficiency could contribute to the findings of Mastoloni et al. Low sIgA levels impair the mucosal immune barrier, increasing susceptibility to infections¹⁷ and possibly prolonging the duration of symptoms such as OD in obese individuals. This relationship provides a plausible explanation for the higher prevalence and longer duration of OD observed in obese individuals, as reported by Mastoloni et al.

Understanding this correlation could be crucial for developing more effective strategies to mitigate the impact of OD in obese patients.

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