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Letter to the editor regarding “The outcome of fluticasone nasal spray on anosmia and triamcinolone oral paste in dysgeusia in COVID-19 patients”

Dear editor,

We appreciate the authors for their work on the treatment for anosmia and dysgeusia following COVID-19 infection in the article “The outcome of fluticasone nasal spray on anosmia and triamcinolone oral paste in dysgeusia in COVID-19 patients” which was published in your journal - American Journal of Otolaryngology and Head and Neck Medicine and Surgery in the issue May–June 2021 (doi.org/10.1016/j.amjoto.2020.102892).

Over the last 15 months, practitioners and researchers have dedicated innumerable hours and resources to understanding and nullifying the threat posed by COVID-19. Olfactory and taste dysfunctions have emerged as prominent signs of COVID-19 infection. This study could help define treatment protocols for olfactory and taste disturbances in COVID-19 patients. But scientific curiosity demands criticism and questioning, to help improve our understanding.

As pointed out by the authors themselves, the study suffers from a lack of a more objective testing methodology and the absence of randomization and blinding. The two groups have not been matched for age, gender, severity of illness or even for taste and olfaction related symptomatology. Allotment of cases in such a situation can be subject to bias, which gets highlighted by the higher prevalence of anosmia on day 1 in controls compared to cases.

The authors have counted Day 1 and Day 5 from the day of testing and not from the onset of symptoms. Klopfenstein et al. found that patients developed anosmia an average of 4.4 days after the onset of infection and stayed for 8.96 days, and 98% of patients could recover within 28 days [1]. Delayed testing may lead to a false assurance of improvement in those who are on their way to natural recovery. A worsening pattern of anosmia in the Control group study could also suggest that some of them were tested earlier than their counterparts in the Case group.

Although taste dysfunction has been hypothesized to result from local inflammation and hypozincemia, olfaction and taste are intricately linked and so is their dysfunction [3]. The timelines regarding their onset and recovery are also similar. This would suggest that steroid nasal sprays may be largely responsible for the improvement. Another study arm with patients receiving nasal steroids alone may have shed some light on this.

A prospective, randomized, controlled trial conducted on 100 patients of COVID-19 was conducted by Abdelalim et al. [4] 50 patients received mometasone furoate nasal spray and the other arm received olfactory training only. In both groups, the smell scores significantly improved at the end of 3 weeks. The authors found no statistically significant difference between both groups after 1 week, 2 weeks, and 3 weeks of treatment. Klopfenstein et al. reported improvement of these symptoms in 80% of their patients after 2 weeks and 98% after 4 weeks

[1]. The population studied by these authors may have significant differences, most important of which may be the ethnicity of the patients, leading to variable results. Another factor that may influence any study on this subject is the difficulty in examining the nasal cavity. Pathophysiological factors associated with inflammation of nasal mucosa paired with anatomical variations can greatly influence the efficacy of nasal sprays. At this point it is difficult to determine whether the combination of triamcinolone oral paste with fluticasone nasal spray or the addition of Zinc as part of the treatment protocol in this study, resulted in the significant differences not reported by others.

It would be interesting to know if the authors obtained history regarding nasal obstruction, nasal trauma, allergic rhinitis and anosmia, hyposmia or dysgeusia before infection with COVID-19 and if so, whether these influenced the results in any way. It would also be worthwhile to follow up with patients who did not recover after 1 week and chart their progress. Anosmia and dysgeusia can be very disturbing symptoms and any treatment that can help accelerate the recovery should be given due consideration. We appreciate the authors for this stimulative work and hope that the above points will help refine this valuable work and any future studies on this subject.

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Declaration of competing interest

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Ravneet Ravinder Verma^{*}, Nitin Gupta, Mugdha Singh
*Department of Otorhinolaryngology, Head and Neck Surgery, Government
Medical College and Hospital, Sector 32, Chandigarh, India*

^{*} Corresponding author.
E-mail address: ravneetrverma@gmail.com (R.R. Verma).