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Treatment Recommendations for Persistent Smell and Taste Dysfunction Following COVID-19—The Coming Deluge

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In their study, "Evolution of Altered Sense of Smell or Taste in Mildly Symptomatic Patients with SARS-CoV-2 Infection," Hopkins et al[1] present the first insight into olfactory outcomes following coronavirus disease 2019 (COVID-19) among a population of Italian patients with otherwise mild disease. This cohort was previously used to establish alterations in self-reported sense of smell and taste as important symptoms of COVID-19, finding a prevalence of 64.4% among the 202 patients treated at home for mildly symptomatic disease.[1] In this important follow-up study, approximately 90% of participants experienced improved olfactory symptoms 4 weeks following initial diagnosis, with 48.7% reporting complete resolution of symptoms during this time. This encouraging finding is consistent with other preliminary reports of high rates of olfactory recovery among patients with COVID-19,[2] but is in stark contrast to other forms of postinfectious smell and taste dysfunction, which are characterized by recalcitrant symptoms in 40% to 60% of those affected.[3]

These findings provide promising evidence that most patients with COVID-19 with otherwise mild disease may recover their subjective sense of smell and taste without directed medical intervention. However, even with a high rate of resolution, the staggering number affected by this evolving pandemic suggests an almost certain deluge of patients likely to present for the treatment of unresolved symptoms. As of May 7, there were roughly 1.2 million Americans diagnosed with COVID-19.[4] According to the results presented by Hopkins et al,[1] approximately 60% of patients will experience altered sense of smell or taste and 10% will have persistent symptoms after 1 month. Based on these estimates, the number affected in the US alone could be in excess of 72000. At the current growth rate of confirmed COVID-19 cases, this number can increase by 1500 per day. Presumably a portion of these patients will recover their sense of smell and taste in the next few months after infection, but there is no doubt we will see a considerable number seeking care for persistent symptoms.

There are frustratingly few interventions for the treatment of postinfectious smell and taste dysfunction.[5] Although several medical interventions, such as oral/topical corticosteroids, phosphodiesterase inhibitors and intranasal calcium buffers are the subject of ongoing study, there remains scant high-quality evidence to justify their routine use in clinical practice. In

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the absence of rigorous study, thoughtful consideration of associated risks and benefits must be considered on an individual basis. Despite the lack of demonstrated efficacy for the use of topical corticosteroids for the treatment of postinfectious smell and taste dysfunction, there is evidence to support its use as a first-line treatment of these symptoms in the setting of chronic rhinosinusitis. Given this evidence and the relatively high safety profile associated with their use, topical corticosteroid sprays and rinses may be considered in the appropriate patient with postinfectious symptoms.

Olfactory training is the only disease-specific intervention with demonstrated efficacy for the treatment of postinfectious small and taste disturbance. Although the exact mechanism for this effect is yet to be described, it is believed that repeated stimulation of olfactory neurons by clearly defined odorants increases both the regenerative ability, and the neuroplastic potential, of this unique system. Positive findings have been replicated in several well-controlled studies, with a 2017 systematic review and meta-analysis demonstrating improved objective scores of olfactory identification, discrimination, and threshold.[6]

Although additional study is needed to identify treatment outcomes among patients with COVID-19 with postinfectious loss of smell and taste, it is reasonable to build on prior treatment guidelines and recommend topical corticosteroids and olfactory training for these patients. Given findings of increased recovery with increased duration of training, I will be offering both modalities as first-line therapies for the oncoming deluge of patients.

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