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## Letter to the Editor

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# Regarding COVID-19 and the Otolaryngologist: Preliminary Evidence-Based Review

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Dear Editor:

We read with interest the review by Vukkadala et al.<sup>1</sup> on the management of coronavirus disease 2019 (COVID-19). They reported that “Amongst patients, there have been reports of anosmia and dysgeusia from China, Italy, and Iran,” referring to a statement by Claire Hopkins, President of British Rhinological Society.<sup>2</sup> In our opinion, olfactory and taste alterations should have been deepened in a review that aimed to inform otolaryngologists.

The American Academy of Otolaryngology–Head and Neck Surgery stated that anosmia and dysgeusia have been reported by patients ultimately testing positive for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), and proposed to add these symptoms to the list of screening tools for possible COVID-19 infection.<sup>3</sup> The European Rhinology Society reported that “a significant part of the COVID-19 patients (20-60%) appear to have loss of smell. Loss of smell can be the presenting symptom before other symptoms like coughing/fever occur.”<sup>4</sup> A survey on olfactory and taste disorders was conducted on COVID-19 hospitalized patients at Hospital Sacco (Milan, Italy): of 59 interviewed patients, 33.9% reported at least one taste or olfactory disorder and 18.6% both alterations.<sup>5</sup> Mao et al.<sup>6</sup> reviewed the neurologic manifestations of 214 hospitalized COVID-19 patients of Wuhan (China) and found hyposmia and hypogeusia in only 5% of included patients.

Postviral anosmia was one of the leading causes of loss of smell in adults,<sup>7</sup> and it should not be a surprise if SARS-CoV-2 would also cause anosmia. Previous studies have shown the ability of SARS-CoV to cause neuronal death in mice by invading the brain via the nose close to the olfactory epithelium.<sup>8</sup> The human coronavirus 229E has already been isolated in nasal discharge from one patient with postviral olfactory dysfunction.<sup>7</sup> SARS-CoV-2 exploited the angiotensin-converting enzyme 2 (ACE2) receptor to gain entry inside the cells.<sup>9</sup> Brain has been reported to express ACE2 receptors that have been detected over glial cells and neurons, which could justify the presence of olfactory disorders in COVID-19.<sup>9</sup>

The use of steroids in COVID-19 remains controversial.<sup>10</sup> The allergic rhinitis and its impact on asthma group recommended that allergic rhinitis patients with

COVID-19 can continue intranasal steroid.<sup>11</sup> The European Rhinology Society advised “not to prescribe nasal or systemic corticosteroids in patients with sudden loss of smell.”<sup>4</sup> This recommendation came from treatment results of SARS and Middle Eastern Respiratory Syndrome<sup>12</sup>: observational data found impaired pulmonary clearance of pathogens, and complications of steroid therapy in survivors.<sup>12</sup>

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